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AUTHOR McAlonan, Susan; Hotchkiss, Heather; Roark, Kelli; Kenney, Marianne; Jackson, Jennifer

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ABSTRACT

This activity guide, for Colorado teachers responsible for teaching geography to students in grades K-12, explains how to use the principles of contextual learning to integrate academic content standards with career development and workplace competencies. The introduction discusses the guide's purpose, the role of standards and assessments in the context of a changing workplace, the Colorado School-to-Career Partnership, and the guide's structure and content. Section 1 presents the Colorado General Workplace Competencies, which describe the skills and knowledge needed for school and career success and which are organized into the following categories: communication; organization; thinking; technology; and worker qualities. Section 2 offers guidelines for helping special populations of students meet academic content standards while participating in school-to-career opportunities. Section 3 features 18 integration matrices and 18 classroom activities for integrating geography standards with workplace competencies. One matrix and one activity are provided for each of six standards for grades K-4, 5-8, and 9-12. Section 4 presents a sample scoring rubric that is aligned with one of the integrated learning activities presented for grades 5-8. (BT)

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N. Bolt

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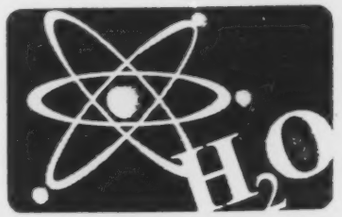
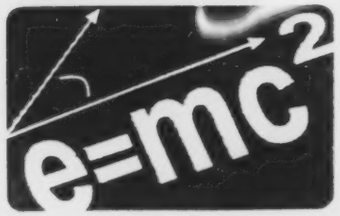
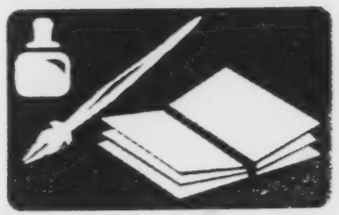
MAKING STANDARDS WORK!

A TEACHER'S GUIDE TO CONTEXTUAL LEARNING:
INTEGRATING ACADEMIC CONTENT STANDARDS
WITH CAREER DEVELOPMENT AND
WORKPLACE COMPETENCIES.







Developed By . . .
The Colorado Department of Education

In Conjuction With . . .
The Colorado School-to-Career Partnership

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- Jack Smith
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MAKING STANDARDS WORK

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Developed and Edited By:

Susan McAlonan	Colorado Department of Education
Heather Hotchkiss	Colorado Department of Education
Kelli Roark	Colorado Department of Education
Marianne Kenney	Mid-Continent Research for Education and Learning (McREL)
Jennifer Jackson	Colorado Department of Education

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CLASSROOM ACTIVITIES DEVELOPED BY:

Cecily Brown	Jefferson County R-1
DeVera Clements	Denver Public Schools
Joann Eickman	Denver Public Schools
Robert Gelston	Adams 1
Colleen Faust	Retired, Jefferson County R-1
Lynette Malm	Sterling R-1
Lori Morrow	Colorado Department of Education
Corine O'Donnell	Independent Consultant (Elem)
Jennifer Rocke	Adams 1
Kay Van Horne	Retired, Denver Public Schools

The Making Standards Work Handbooks can be downloaded for free at:
http://www.cde.state.co.us/

Colorado School-to-Career Partnership

The Colorado School-to-Career Partnership is a statewide effort assisting local schools and communities to develop a K-16 learning system that promotes attainment of high academic standards, career development and workforce preparation for every student.

Academics and career development are integrated in classrooms and worksite experiences, and aligned with content standards and assessment. There are currently 91 local School-to-Career Partnerships in Colorado representing 144 school districts. An estimated 209 000 K-16 students have already participated in one or more school-to-career activities and the momentum continues to build in communities around our state.

Using this Handbook

Making Standards Work is divided into four sections:

I. Workplace Competencies: This section presents the Colorado General Workplace Competencies, which were developed by a business task force of the Colorado Association of Commerce and Industry and validated by educators and business professionals across the state. These competencies describe the skills and knowledge students need to be successful in most careers and in college. The competencies are organized into the following categories:
   - Communication
   - Organization
   - Thinking
   - Technology
   - Worker Qualities

   These workplace competencies must be intentionally taught and assessed to assist students in transferring classroom learning to the world of work and to post-secondary education.

II. *Opportunities for Success*: This section offers guidelines for educators as they help special populations of students, who have diverse and sometimes very unique needs, meet academic content standards and participate in school-to-career opportunities.

> In Colorado, Access Skills are those skills that all students must demonstrate in order to succeed with academic content standards and in the workplace. Access Skills are a combination of the Colorado General Workplace Competencies and the Essential Learning Principles defined in *Opportunities for Success*.

III. Integration Matrices and Classroom Activities: This section features grids that provide examples of how the Colorado General Workplace Competencies cross-reference with the Colorado Model Content Standards for geography. To help educators think about how to integrate the workplace competencies into their geography instruction, the grids are followed by examples of classroom strategies that combine a specific academic content standard, career development activity, general workplace competency and assessment strategy.

   Quotes and Resources: Through the quotations, Colorado educators, business leaders and students (with parental consent) offer their perspectives on integrating workplace competencies and academic content standards. The featured resources provide a starting point in locating additional integrated curriculum, work-based learning opportunities or connecting activities. They also may offer helpful information for expanding current educational strategies.

   Activities and resources included in this handbook are intended for use at the discretion of local districts. They have not been endorsed or ratified by any official Colorado State body.

III. Sample Rubric: A rubric is a descriptive measurement for determining what a student knows and can do. An assessment rubric aligned with the integrated learning activity on page 18b is included. Educators can use this example to create additional rubrics to assess student learning.

INTRODUCTION

As educators we strive to reach every student in our classroom. We measure our success when students grasp a new concept, move successfully to the next grade level or achieve recognition for their skills and abilities. However, the ultimate test is often when we see how our former students are doing as adults. We want to know about college, their job and family and if they are happy with their lives. When students are successful, we are proud of the role we played in their development. When students struggle with the transition from school to post-secondary education and/or work, we often step back and reflect: Did we do enough to prepare students for life after school? What makes the difference between those students who are successful and those who are not?

Making Standards Work is a tool to help educators weave academic content standards, assessments and school-to-career methods into an integrated and comprehensive educational strategy that prepares all students to meet their future goals. The examples contained in this publication were created by Colorado educators to provide a vision of how teachers can deliver instruction in ways that help students reach high academic standards, develop effective work habits and gain career knowledge. Handbooks for other academic content areas are currently under development.

Standards and Assessment

Colorado enacted legislation in 1993 to adopt a standards-driven system of education. Public support for this reform is high and 48 other states have developed, or are in the process of developing, standards for what students should know and be able to do at various points in their schooling.

Standards-driven reform is based on the premise that students can achieve more if the expectations for learning are clearly defined, if students know in advance the criteria for meeting those expectations and if teaching and assessment support the expectations and reinforce student effort. Standards enhance accountability by focusing on student results, not on the curriculum, educational program or other "inputs" used by a particular school.

Colorado's model content standards represent the consensus of thousands of parents, educators, administrators, employers and interested community members. The standards were developed through a two-year process that involved three publicly reviewed drafts, approximately 10,000 responses to these drafts and a series of regional meetings across the state.

The standards reflect a "thinking" curriculum - one that requires students to know basic skills, to communicate effectively to solve problems, and to understand and apply academic principles and tools. They define a set of skills and knowledge that will prepare Colorado students for employment, citizenship and life-long learning in the new century.

Changes in the Workplace

The national economy is undergoing major changes that have an impact on both the opportunities available to workers and the expectations and needs of their employers, such as:

- The number of jobs that employ unskilled workers is rapidly diminishing. Those jobs that do exist increasingly fail to pay a living wage.
- The income gaps among workers who dropped out of high school, those who graduated from high school, those who have an associate degree and those with a bachelor's degree are significant and growing.
- New technologies and services continue to emerge rapidly. Nearly 50% of employers use equipment less than four years old. On average, 42% of non-managerial employers now use computers in their work.
- The growth of new information and knowledge is exploding, doubling in a span of ten to fifteen years.

Schools must change as well to ensure that they are preparing students who can succeed in this dynamic environment.

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I. WORKPLACE COMPETENCIES

The Colorado General Workplace Competencies were developed by a business task force of the Colorado Association of Commerce and Industry and validated by educators and business leaders across the state. These competencies represent the skills that post-secondary students and workers need in most jobs regardless of the specific occupational area.

These competencies will help educators and students understand what skills and knowledge students need to succeed in the workforce. The competencies also provide Colorado businesses with a consistent set of standards that promote a skilled workforce.

Communication Skills - Demonstrates the ability to receive and relay information clearly and effectively

Listening - receives, attends to, understands and responds to verbal and non-verbal messages
Speaking - clearly organizes and effectively presents ideas orally
Reading - locates, understands and interprets written information in prose and documents to perform tasks
Writing - organizes and effectively presents ideas and information in writing
Interpreting - delineates and analyzes oral and written information and synthesizes information into a conclusion
Negotiating - works toward agreement while maintaining position
Persuading - communicates ideas to justify position, overcomes resistance and convinces others

Organizational Skills - Demonstrates the ability to work effectively and efficiently

Planning - devises and outlines a process to achieve a goal and timeline
Time Management - applies appropriate time to task and manages multiple priorities
Using Resources - identifies, organizes, plans and allocates resources
Systems Thinking - understands the nature of systems, develops and adapts systems to meet organizational needs
Evaluating - collects, evaluates and uses data to monitor and improve performance

Thinking Skills - Demonstrates the ability to use reasoning

Problem Solving - identifies and recognizes a problem, considers alternatives, devises and implements a logical plan of action
Decision Making - uses a process to identify goals and constraints, evaluates alternatives and reaches a conclusion
Creative Thinking - generates new and innovative ideas
Learning - uses efficient techniques to acquire and apply new knowledge and skills
Analyzing - identifies bias of information sources, evaluates contradictory information and effectively manages information
Mathematics - performs basic computations and solves practical problems by applying appropriate mathematical techniques

Worker Qualities - Demonstrates the characteristics of an effective worker

Self-Management - demonstrates punctuality, readiness to work, initiative and the capacity for life long learning and personal growth
Team Member - contributes to group effort through cooperation and consensus
Responsibility - follows through consistently with honesty and integrity
Flexibility - shows versatility and the ability to change
Leadership - creates a direction/vision for others to follow, aligns management methods with vision and implements a system of accountability
Works with Diversity - accepts differences and works well with individuals from a variety of backgrounds and/or with divergent philosophies or ideas

Technology Skills - Demonstrates the ability to work with a variety of technologies and equipment

Demonstrates Computer Literacy - uses keyboarding skills, computer programs and understands basic computer operations
Selects Technology - chooses appropriate procedures, tools or equipment
Applies Technology - understands overall intent of and proper procedures for using selected technology and equipment
Uses Technical Information - interprets and uses data generated from a variety of technological devices

Note: Technology refers to any device, tool or piece of equipment that facilitates or supports efficient completion of work, including machinery, computers, scientific equipment, fax machines, voice mail, overhead projectors, VCRs, cash registers, and calculators.

II. OPPORTUNITIES FOR SUCCESS

GUIDELINES FOR BRINGING OUT THE BEST IN ALL OF OUR STUDENTS

"*Opportunities for Success*" was created through a process that engaged over 2,100 Colorado educators, parents and citizens from across the state and drew on the expertise of national professional organizations. Its purpose is to provide guidelines for educators as they help special populations of students, who have diverse and sometimes very unique needs, meet academic content standards.

These guidelines may be useful to:

- Curriculum directors as they coordinate and develop curriculum and instruction around standards
- Classroom teachers as they plan for their students
- Assessment professionals as they develop district and classroom assessments
- Building level planning committees as they work on school improvement efforts

A. GENERAL PRINCIPLES

The four areas described below (Essential Learnings, Classroom Practices, Assessment Practices and Service Options) are designed to assist special needs students gain the skills necessary to reach high academic standards.

Essential Learnings - the knowledge and skills that special needs students require to maximize their educational growth and development.

Students who are diverse learners need to learn:

1. Communication skills to express and understand thoughts and opinions in a variety of settings, situations and with diverse populations.

2. Decision making and problem solving skills and strategies.

3. Basic language skills and a broad vocabulary to use as building blocks in developing reading, writing and critical thinking.

4. Self-advocacy skills to make their needs and wants known in socially constructive ways in learning, work and social situations.

5. Personal strengths and capabilities and the ability to use this knowledge to act responsibly at school and work.

6. Social skills to develop positive relationships with peers and adults in a variety of settings and situations and with diverse populations.

7. Organizational skills and study strategies for school and work. Important skills include, but are not limited to:
   - Time management
   - Goal setting
   - Management and use of materials/resources
   - Learning strategies

8. Career development skills to make, pursue and maintain personal employment choices.

9. The use of tools and technology to augment learning and access information.

Classroom Practices - the range of instructional practices and strategies that teachers employ to help a special population of students learn. These include, but are not limited to:

- Time
- Space
- Modality
- Grouping
- Presentation
- Classroom organization and behavior management
- Materials
- Equipment
- Technology
- Environment

With the needs of diverse learners in mind, educators need to employ appropriate:

1. Student Self-Management Strategies
   - Use strategies designed to promote student self-management and independence.
   - Provide consistency, structure and clear expectations.
   - Provide appropriate positive learning reinforcement, feedback and recognition for student accomplishment.

2. Setting for Instruction and Learning
   - Promote supportive and responsive climates that facilitate social and cultural learning and allow students to take risks and learn from failure.
   - Provide opportunities and environments that allow all students to participate meaningfully in instructional and social activities.
   - Adapt physical environments to match the learning needs of students.

3. Instructional Practice
   - Incorporate life skills, social and affective skills and self-advocacy skills throughout the curriculum.
   - Choose teaching and learning methods that match the learning needs and styles of the students.
   - Incorporate direct instruction of how-to-learn skills and thinking skills throughout the curriculum.
   - Ensure the language of instruction effectively communicates and promotes student understanding for students with special needs.
   - Use methods to promote active learning, including hands-on learning, real-world and experiential learning, community-based learning and learning involving student choice.
   - Use learning materials, equipment and media tailored to the unique learning needs of students.
   - Design and implement specific opportunities for students to apply and transfer learning to a variety of situations, both familiar and new.
   - Use varied and flexible grouping strategies for instructional purposes.
   - Use flexibility in pacing instruction, scheduling and the use of time based on the needs of individual students.
   - Communicate and collaborate with other teachers, specialists, students, families and appropriate agencies in planning and implementing effective instruction.

Assessment Practices - the accommodations and adaptations necessary for a special population to adequately demonstrate knowledge and skills.

In assessing the learning of diverse learners, educators need to:

1. Allow for a variety of assessments that evaluate what is being taught, including:
   - Portfolios
   - Assessment of daily work
   - Observations
   - Self and peer evaluations
   - Demonstrations and projects
   - Oral tests
   - Cooperative group assessments
   - Family, community and employer evaluations/observations
2. Ensure that the language used in assessment is consistent with the language used during instruction and reflects the student's preferred mode of communication, considering the:
   - Student's culture/preferred language
   - Clarity of instructions
   - Verbal and non-verbal options (i.e., sign language)
3. Consider the student's unique needs when determining the content of the assessment.
   - Identify the skills and content to be assessed and ensure that assessments test only the content that was taught.
   - Design assessments to determine what the student knows as opposed to what the student does not know.

- Utilize student's prior knowledge to determine instruction and subsequent assessments.

- Identify individual learning styles and design assessments to elicit a variety of thinking and application skills.

4. Design assessment procedures and accommodations to meet individual student needs.

   - Assess in the student's primary communication mode (i.e., Braille, sign language, picture board).

   - Use a variety of people (i.e., family, peers, employers, other professionals) in the assessment process.

   - Use technology for presentation of assessment and student response.

5. Allow flexibility in the time and scheduling of assessments.

   - Allow extended time.

   - Allow the student to take breaks.

   - Divide assessments into smaller segments.

   - Schedule assessments when students can perform best.

   - Use untimed assessments.

6. Allow for a variety of assessment environments. Consider the purpose of the assessment and the student's unique needs and choose the environment that fits best.

   - Consider the student's physical condition, endurance, attention span, distractibility, emotional state and medical condition, at the time of assessment.

   - Control for distractions.

   - Create supportive settings that encourage student participation.

   - Use preferential seating.

   - Use real life settings and other alternative environments.

7. Consider the evaluation criteria that will be used when designing assessments and set the criteria prior to assessment.

   - Involve others in determining realistic expectations and goals for the student.

   - Provide family and others the opportunity to assist in interpreting assessment results.

   - Make expectations and criteria clear and explicit.
   - Provide a variety of grading methods, including:
     - Individual grading scale
     - Narrative reports
     - Group grades

Service Options - systems of organizing people and materials to supply and deliver educational opportunities, accommodations and supports in order for students or given populations to become successful learners.

For diverse learners to have adequate opportunities to learn, schools will:

1. Involve families, community members and peers integrally in the design and implementation of educational services for all children and youth.

2. Use shared and flexible resources, including personnel, money, facility, program, time and administrative processes to meet students' needs and to offer appropriate services by providers with specific expertise.

3. Offer curriculum and instruction that is diversified through a variety of modifications, including alternative scheduling, accessibility, optimal learning environments, grouping, accommodation of multiple learning styles, setting appropriate expectations, student-teacher ratios and a variety of instructional techniques.

4. Support collaborative planning with individual students, team members, family members, the community and other agencies with the management of time and resources.

5. Design support services for students that help them with life management, including safety, health, wellness, social relationships and learning.

6. Assure students the opportunity to plan and prepare for successful life adjustment after high school, including career development, community involvement, post-secondary education, recreation and leisure choices, and daily living activities

7. Maximize the use of technology for learning. School professionals, families, and students use technology competently.

8. Offer a menu of educational opportunities to students, families and school personnel for continuous improvement of services to students.

9. Offer support services to assist students in managing behavior, expressing needs, developing friendships, resolving conflicts, making choices and planning their lives.

B. ADAPTATIONS

Adaptations are changes made to the environment, curriculum, instruction and/or assessment practices in order to help a student become a successful learner. Adaptations are based on the strengths and needs of individual students and may vary in intensity and degree.

Adaptations include:

1. **Accommodations:**
   Accommodations are adjustments made in *how* a student accesses and demonstrates learning. They do not substantially change the instructional level, content or the performance criteria. The changes are made in order to provide students equal access to learning and an equal opportunity to demonstrate what they know. Accommodations include changes in and/or provisions for the following:
   - Presentation and/or response format and procedures
   - Instructional strategies
   - Time/scheduling
   - Attitudes
   - Architecture
   - Environment
   - Equipment

2. **Modifications:**
   Modifications are substantial changes in *what* a student is expected to learn and demonstrate. They are made to provide students with opportunities to participate meaningfully and productively in learning experiences and environments. Modifications include changes in the following:
   - Instructional level
   - Content
   - Performance criteria

** Note: Under Colorado Law 22-7-407 et. seq. C.R.S., a student must have a Special Education Individualized Education Plan (IEP) to qualify for modifications to the standards, unless the modifications exceed those of district/state content standards.*

Opportunities for Success contains many strategies for specific special population groups including:

- Attention Deficit Disorder
- Chapter I (Title 1)
- Deaf/Blind
- Deaf/Hearing Impaired
- Gender
- Gifted Individuals
- Language Minority Students
- Learning Disabilities (Perceptual/Communicative)
- Migrant Students
- Physically Disabled and 504
- Prevention Initiatives (High-Risk)
- Race
- Significant Cognitive Challenges
- Significant Identifiable Emotional Disabilities
- Speech/Language Needs
- Traumatic Brain Injury
- Visual Disabilities

The complete version of *Opportunities for Success* can be purchased for $18.00 by contacting:
The Colorado Department of Education
Special Education Services Unit
(303) 866-6694

GRADES K-4

III. INTEGRATION MATRICES AND CLASSROOM ACTIVITIES

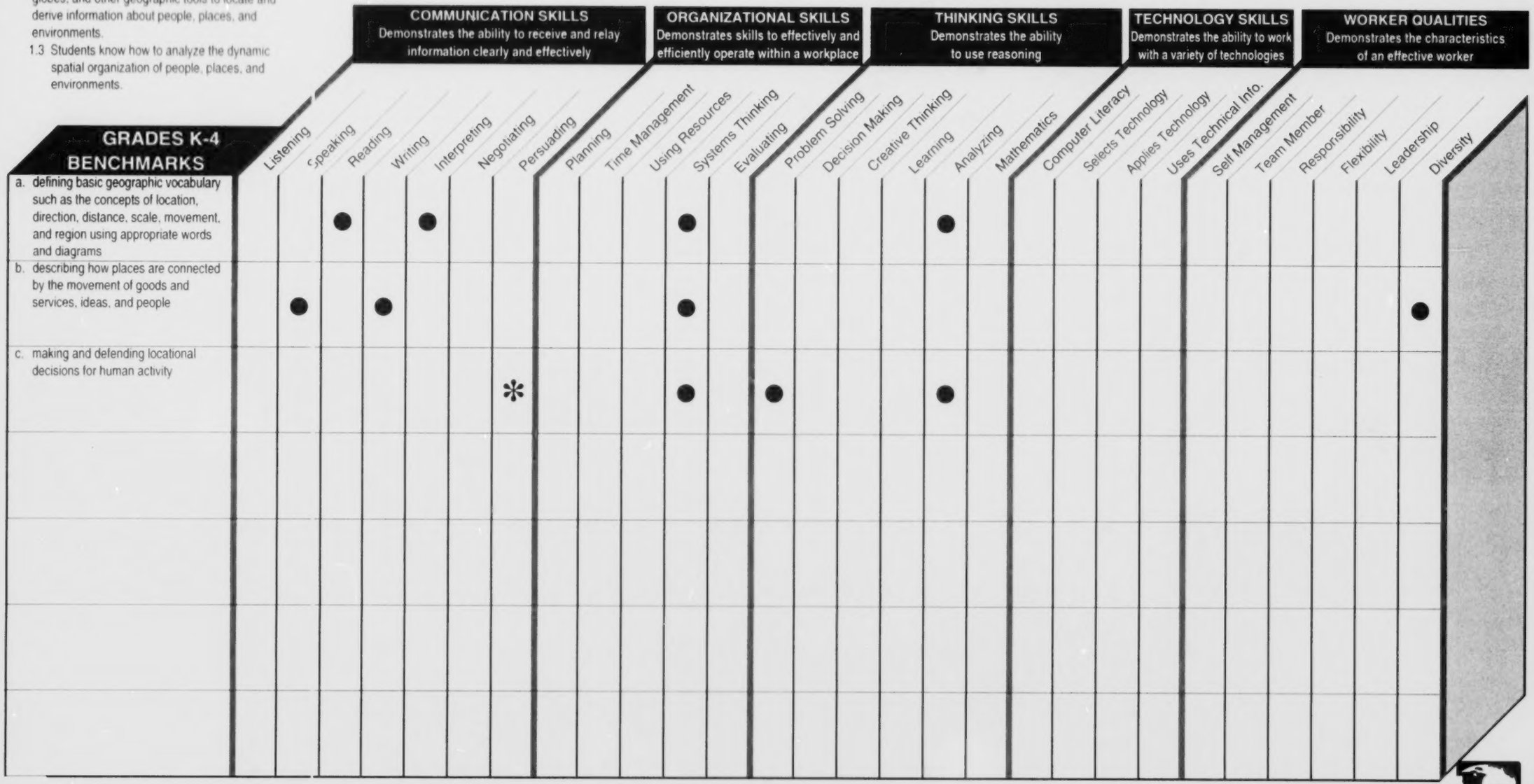
INTEGRATING SCIENCE STANDARDS
WITH WORKPLACE COMPETENCIES

GEOGRAPHY

Academic Content Standard

1. Students know how to use and construct maps, globes, and other geographic tools to locate and derive information about people, places, and environments.
   - 1.3 Students know how to analyze the dynamic spatial organization of people, places, and environments.

Workplace Competencies



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K-4

GRADE LEVEL

K 1 2 3 4 5 6 7 8 9 10 11 12

STATE STANDARD

1. Students know how to use and construct maps, globes, and other geographic tools to locate and derive information about people, places, and environments.
   1.3 Students know how to analyze the dynamic spatial organization of people, places, and environments.

BENCHMARK

c. making and defending locational decisions for human activity

WORKPLACE COMPETENCY

Communication Skills: Persuading
communicates ideas to justify position, overcome resistance and convince others

RESOURCE

The *Journal of Geography* printed a similar activity from Dwight Zerski, an elementary teacher in Oregon. Website for the National Council of Geographic Education:
www.ncge.org

"We shall not cease from exploration and at the end of all our exploring, we will arrive where we started and know the place for the first time.

- T.S. Elliot, *Four Quartets*

GEOGRAPHY

LEARNING ACTIVITIES

ACADEMIC CONTENT STANDARD

The class researches the community and picks one traffic intersection to study. Teacher devises a scenario, such as, a developer bought an old, run down railroad station and gave it a massive face-lift with restaurants, upscale shops and boutiques, and a four-theater cinema complex, it was instantly an overwhelming success. In fact, it has significantly stimulated the city's downtown area and has become its centerpiece. That has meant increasing automobile traffic on the main street and adjacent access streets. Unfortunately the children at a nearby elementary school have been finding it difficult to safely cross one of the busy downtown arterial streets on which the school is located.

The class devises a plan to create a persuasive statement to present to the mayor and the chief of police regarding the safety of the intersection and possibly requesting that the city install a signal light to allow the children to cross. To prepare, the students have to gather supporting information. They may create and circulate a petition, gather signatures and present their information, and gather data, for example, count the number of cars that drive by each hour and average them for a school day to make the statement even stronger.

WORKPLACE COMPETENCY

COMMUNICATION SKILLS: PERSUADING

As a class, the definition of persuading is discussed and some examples are given. The students identify the skills needed and what type of data is needed to support and present their position. Students also identify career areas where these skills are utilized.

CAREER DEVELOPMENT/COMMUNITY

- Invite a staff member from the mayor's office to give advice on the important points to include when writing a persuasive letter.
- Invite a police officer to discuss safety and the communication skills needed in police work.

ASSESSMENTS

ACADEMIC CONTENT STANDARD

Evaluate the students on their ability to:

- create a step-by-step plan
- follow the plan, making adjustments when necessary
- gather information to support their position
- identify alternatives and feasibility
- present their position in a clear, concise manner
- identify alternatives and feasibility.

WORKPLACE COMPETENCY

COMMUNICATION SKILLS: PERSUADING

Evaluate the students on their ability to:

- present a clear, consistent message
- use material and data to support their position
- provide rational for position
- restate their position based on opposition.

EXTENSIONS

- This activity could be technology-based using geographic information systems (GIS).
- Students may develop a brochure about safety precautions

GEOGRAPHY

Academic Content Standard

2. Students know the physical and human characteristics of places and use this knowledge to define and study regions and their patterns of change.
   2.1 Students know the physical and human characteristics of places.

Workplace Competencies

GRADES K-4 BENCHMARKS	COMMUNICATION SKILLS Demonstrates the ability to receive and relay information clearly and effectively							ORGANIZATIONAL SKILLS Demonstrates skills to effectively and efficiently operate within a workplace				THINKING SKILLS Demonstrates the ability to use reasoning							TECHNOLOGY SKILLS Demonstrates the ability to work with a variety of technologies				WORKER QUALITIES Demonstrates the characteristics of an effective worker					
	Listening	Speaking	Reading	Writing	Interpreting	Negotiating	Persuading	Planning	Time Management	Using Resources	Systems Thinking	Evaluating	Problem Solving	Decision Making	Creative Thinking	Learning	Analyzing	Mathematics	Computer Literacy	Selects Technology	Applies Technology	Uses Technical Info.	Self Management	Team Member	Responsibility	Flexibility	Leadership	Diversity
a. identifying and classifying the characteristics of places as human or physical			●		●					●						*												
b. describing how human and physical processes together shape places				●	●					●						●												

K-4

GRADE LEVEL

K 1 2 3 4 5 6 7 8 9 10 11 12

STATE STANDARD

2. Students know the physical and human characteristics of places and use this knowledge to define and study regions and their patterns of change.
   2.1 Students know the physical and human characteristics of places.

BENCHMARK

a. identifying and classifying the characteristics of places as human or physical

WORKPLACE COMPETENCY

Thinking Skills: Analyzing
identifies bias of information sources, evaluates contradictory information and effectively manages information

RESOURCE

EduHound was developed and conceived in the spring of 1999 by a team of Educators, Teachers and Parents, who felt the need for an Educational Directory to help them cut through the clutter that was currently available on the Web. The primary focus is serving users, specifically K-12 Educators, Students and their Families.

Eduhound.com
P.O. Box 694
Broad Brook, CT 06016
860/875-8821
info@eduhound.com

"It is through the power of observation, the gifts of the eye and ear, of tongue and nose and finger, that a place rises up in our mind. Afterward it is a memory that carries the place, that allows it to grow in depth and complexity. For as long as our records go back, we have held these two things dear: Landscape and Memory. The one feeds us figuratively and literally, the other protects us from lies and tyranny.

- Lopez, 1989

GEOGRAPHY

LEARNING ACTIVITIES

ACADEMIC CONTENT STANDARD

The look of the environment in any one place is the result of both physical features, such as vegetation, soil, and climate, and human features, such as buildings, roads, and other things people have made. Students will use their observational skills to identify environmental characteristics and analyze changes that people have made to the natural environment.

Introduce students to the term "environment" and ask them to suggest basic components of the physical and human environment. Tell students that they are going outside to observe the environment around the school and give them a set of questions to explore. Give students a time limit and set boundaries for their exploration.

As students return to the classroom, have them list their discoveries of the human and physical environments on poster paper.

WORKPLACE COMPETENCY

THINKING SKILLS: ANALYZING

The definition of analyzing is given and discussed. Examples of this skill are identified. Students are given several questions to answer regarding their discoveries or as a class, analyze the findings. Discuss both positive and negative aspects of the environment. Give students a list of ten environmental features and ask them to categorize each as natural, human, or adapted. Have the students present their findings in small groups and discuss their opinions regarding the environmental issues.

CAREER DEVELOPMENT

Invite someone from the city or town council to discuss local environmental issues in your community.

COMMUNITY

Ask students to write letters to the editor of the local newspaper stating their positions on a local environmental issue. Have students sign and mail the letters.

ASSESSMENTS

ACADEMIC CONTENT STANDARD

Evaluate the students on their ability to:
- identify characteristics of the environment
- make valid observations and portray those observations accurately
- categorize the environmental features.

WORKPLACE COMPETENCY

THINKING SKILLS: ANALYZING

Evaluate the students on their ability to:
- define and give examples of analyzing
- identify the concerning or favorable factors of different environmental issues
- formulate an opinion about the environmental issues and discuss and support this opinion
- identify positive and negative aspects of the environment
- categorize the environmental features correctly.

EXTENSIONS

Have students work in groups to create small murals that depict natural, human, or adapted features of the local environment. When the murals are complete, have students place small color-coded dots, stickers, or create hand-drawn or computer generated symbols to identify each of the environments.

GEOGRAPHY

Academic Content Standard

3. Students understand how physical processes shape Earth's surface patterns and systems.
   3.2 Students know the characteristics and distributions of physical systems of land, air, water, plants, and animals.

Workplace Competencies

GRADES K-4 BENCHMARKS	COMMUNICATION SKILLS: Demonstrates the ability to receive and relay information clearly and effectively							ORGANIZATIONAL SKILLS: Demonstrates skills to effectively and efficiently operate within a workplace					THINKING SKILLS: Demonstrates the ability to use reasoning						TECHNOLOGY SKILLS: Demonstrates the ability to work with a variety of technologies				WORKER QUALITIES: Demonstrates the characteristics of an effective worker				
	Listening	Speaking	Reading	Writing	Interpreting	Negotiating	Persuading	Planning	Time Management	Using Resources	Systems Thinking	Evaluating	Problem Solving	Decision Making	Creative Thinking	Learning	Analyzing	Mathematics	Computer Literacy	Selects Technology	Applies Technology	Uses Technical Info.	Self Management	Team Member	Responsibility	Flexibility	Leadership	Diversity
a. identifying characteristics of physical systems				●						●			●			●												
b. describing local environmental features and identifying the physical system to which they belong		●		●						●			●			●												
c. comparing patterns and distribution of environments within a physical system			●		●				*	●			●			●												

BEST COPY AVAILABLE

K-4

GRADE LEVEL

K 1 2 3 4 5 6 7 8 9 10 11 12

STATE STANDARD

3. Students understand how physical processes shape Earth's surface patterns and systems.
   3.2 Students know the characteristics and distributions of physical systems of land, air, water, plants, and animals.

BENCHMARK

c. comparing patterns and distribution of environments within a physical system

WORKPLACE COMPETENCY

Organizational Skills: Using Resources
identifies, organizes, plans and allocates resources

RESOURCE

CD-ROM:
National Geographic
- Picture Atlas of the Our World
- World of Plants

VIDEOS:
National Geographic
- Where Animals Live: Physical Geography of the Continents: Africa; Physical Geography of North America Series: Western Dry Lands

WEB SITE:
National Geographic

The complete unit can be found in Mapping Out a Standards-Based Framework in Geography, Colorado Department of Education, 1995. The extension assessment developed by Janet Pommrehn, elementary teacher, Denver Public Schools, can be found on CDE's website: www.cde.state.co.us Standards in Action.

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GEOGRAPHY

LEARNING ACTIVITIES

ACADEMIC CONTENT STANDARD

Students investigate the grasslands. Students identify and use a number of books/resources about the grasslands (short grass prairie, steppe, long grass prairie, pampa, puszta, veldt, savanna) to provide background knowledge. Students also chart the types of grasslands and its characteristics. After the background is set, concentrate on Colorado short grass prairie and Kenya savanna. Compare and contrast the two in terms of plants, animals, humans, etc.

Students create a diorama that will be used in the assessment. Select containers that will hold soil and water. Divide students into small groups and plant grasses. Plant Colorado and Kenya grasses in both of the containers using different types of soil. Students study and document the growth and determine which grasses grow in which soil best and make educated guesses as to the reasons. Students make the previously planted container into a recognizable ecosystem by adding plants, animals, people, homes, etc. in some art form (clay, paper, etc.). Weather and climate factors may be included.

WORKPLACE COMPETENCY

ORGANIZATIONAL SKILLS: USING RESOURCES

As a class, discuss the organizational skills used in this activity (specifically how to identify and use resources). Students are asked to brainstorm and document new ways of getting information and identify other community resources (ie., Botanical Gardens).

CAREER DEVELOPMENT

Identify and discuss several different career areas that have been accessed by doing this activity.

COMMUNITY

Student identify and use community resources in their research (ie., Botanical Gardens, University extension agency, etc.)

ASSESSMENTS

ACADEMIC CONTENT STANDARD

Present diorama to the class and justify contents using information gathered and charts.
- plant the grasses and document growth
- chart the similarities and differences in grasslands
- identify other appropriate components for the ecosystem

WORKPLACE COMPETENCY

ORGANIZATIONAL SKILLS: USING RESOURCES

Evaluate the students on their ability to:
- identify at least five different resources (traditional and community)
- gather useful information from resources
- present the information in a clear and concise manner.

EXTENSION

Students categorize a list of grasslands as physical or human. Using those, students fill in a chart listing possible resources and uses of grasslands. Students then write a speech for the governor telling what they think would be the best way to use the remaining grasslands in Colorado and list four geographic reasons why that choice is a good one.

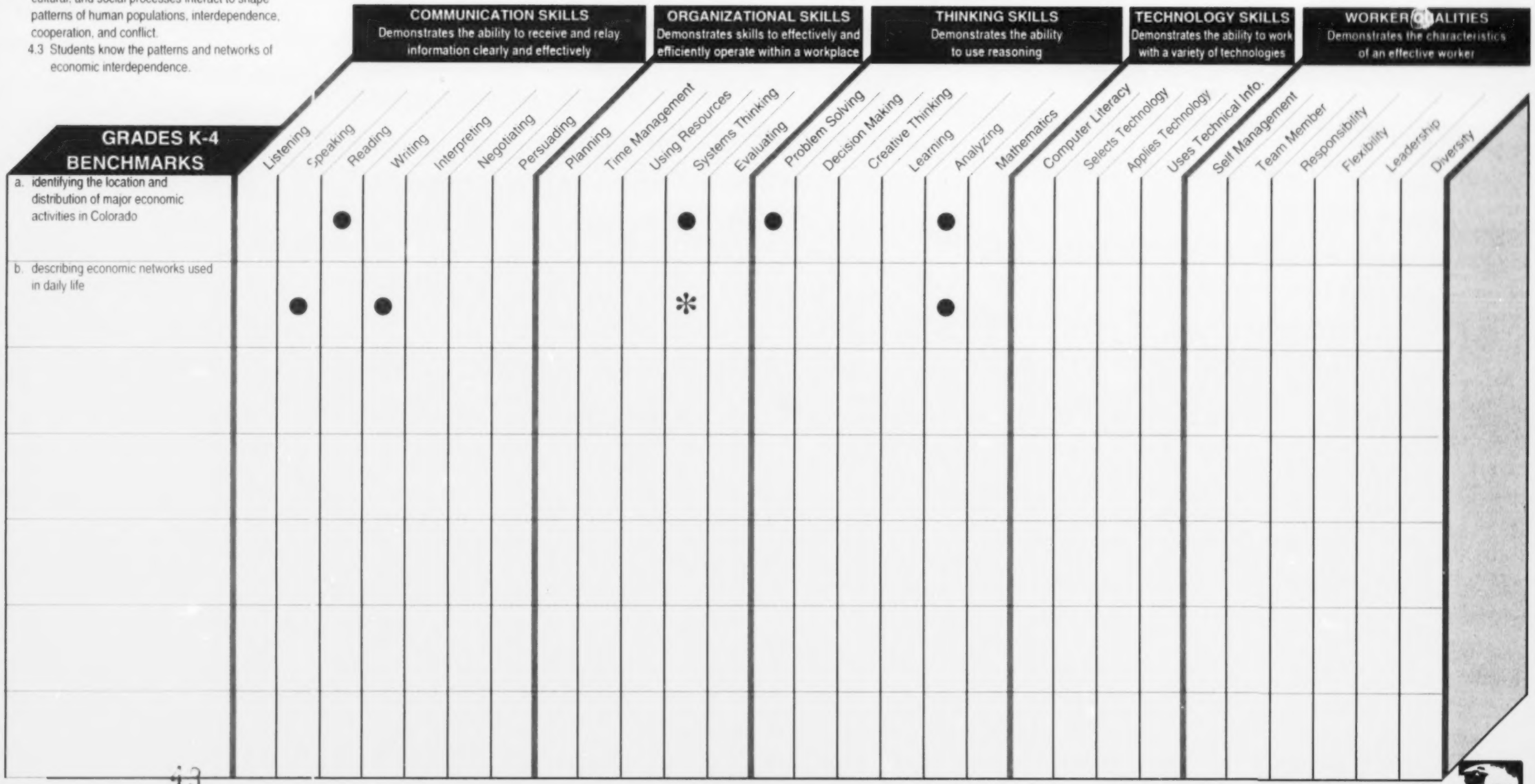
Students analyze the future of Earth's most precious natural resources.

GEOGRAPHY

Academic Content Standard

4. Students understand how economical, political, cultural, and social processes interact to shape patterns of human populations, interdependence, cooperation, and conflict.
   4.3 Students know the patterns and networks of economic interdependence.

Workplace Competencies



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K-4

GRADE LEVEL

K 1 2 3 4 5 6 7 8 9 10 11 12

STATE STANDARD

4. Students understand how economic, political, cultural, and social processes interact to shape patterns of human populations, interdependence, cooperation, and conflict.

BENCHMARK

4.3 Students know the patterns and networks of economic interdependence

b. describing economic networks used in daily life

WORKPLACE COMPETENCY

Organizational Skills: Systems Thinking understands the nature of systems, develops and adapts systems to meet organizational needs

QUOTATION

"All things are connected like the blood which unites only family. All things are connected."

- Chief Seattle

GEOGRAPHY

LEARNING ACTIVITIES

ACADEMIC CONTENT STANDARD

Distribute a world outline map to each student. Ask them where they think most of their clothing is made. List their responses on the board. Next, ask students with the help of a partner, where their shirts and blouses were made. Have each student label the country on a world map. Allow them to consult atlases to check locations.

Have students use stickers to mark the locations of the countries of origin on a world map. Ask students the following questions:

- are there particular areas that dominate the maps?
- do we live independently of other nations?
- what are the advantages and disadvantages of interdependence?
- what are positive and negative aspects of clothing manufacturing for the cities listed?

WORKPLACE COMPETENCY

ORGANIZATIONAL SKILLS: SYSTEMS THINKING

As a class, define and discuss the aspects of a system. Identify the components of the research system - manufacturing and import/export of clothes. Identify and record the systemic changes that would happen if one or more of the components changed.

CAREER DEVELOPMENT

Invite an international business person into class to discuss a product that is exported to another country or someone who imports goods and have them explain the process.

COMMUNITY

Students create posters, flyers or persuasive papers that illustrate the concept of interdependence.

ASSESSMENTS

ACADEMIC CONTENT STANDARD

Evaluate the students on their ability to:

- identify (through the use of resources) the origin of their clothes
- indicate these cities/countries correctly on the map
- answer questions thoroughly and based on fact.

WORKPLACE COMPETENCY

ORGANIZATIONAL SKILLS: SYSTEMS THINKING

Evaluate the students on their ability to:

- define systems thinking
- identify the components of the system
- identify possible systemic changes when components are altered.

EXTENSION

Have students inventory their items in their homes, such as kitchen equipment, rugs, furniture, food in the refrigerator, and articles of clothing. Make a list of locations of origin and have students mark those locations on a world map. Compile all the information on a large world map. Discuss distribution of goods, and see if students can make any inferences about regions and products.

GEOGRAPHY

Academic Content Standard

5. Students understand the effects of interactions between human and physical systems and the changes in meaning, use, distribution, and importance of resources.
   5.1 Students know how human actions modify the physical environment.

Workplace Competencies

GRADES K-4 BENCHMARKS	COMMUNICATION SKILLS Demonstrates the ability to receive and relay information clearly and effectively							ORGANIZATIONAL SKILLS Demonstrates skills to effectively and efficiently operate within a workplace							THINKING SKILLS Demonstrates the ability to use reasoning							TECHNOLOGY SKILLS Demonstrates the ability to work with a variety of technologies						WORKER QUALITIES Demonstrates the characteristics of an effective worker					
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a. identifying how people depend upon, adapt to, and modify the physical environment		●	*	●						●						●														

K-4

GRADE LEVEL

K 1 2 3 4 5 6 7 8 9 10 11 12

STATE STANDARD

5. Students understand the effects of interactions between human and physical systems and the changes in meaning, use, distribution, and importance of resources
   5.1 Students know how human actions modify the physical environment.

BENCHMARK

a. identifying how people depend upon, adapt to, and modify the physical environment

WORKPLACE COMPETENCY

Communication Skills: Writing
organizes and effectively presents ideas and information in writing

RESOURCE

This lesson can be found in Ajello, A.. A Teacher's Guide to Performance-Based Assessment in Geography. Washington D.C.: National Geographic Society, 1999. To obtain a copy visit the National Geographic website at www.nationalgeographic.com or e-mail a query to education@ngs.org

Simmons College for "EnviroNet" www.earth.simmons.edu
EnviroNet is a network of teachers, scientists, and environmental educators. The site offers a variety of online monitoring projects and related resources for classrooms use.

GEOGRAPHY

LEARNING ACTIVITIES

ACADEMIC CONTENT STANDARD

Based on their reading of *A River Ran Wild*, by Lynn Cherry, students will demonstrate an understanding of the relationship between human activities, and the impact of those activities on a natural resource, the Nashua River. In a passage of text, students underline clues that show the Nashua River was clean and healthy. Discuss your own community land and water sources and how our lives effect these.

WORKPLACE COMPETENCY

COMMUNICATION SKILLS: WRITING

As a class, review the appropriate grammar and writing skills. Students explain in writing, how people depended on the river and that the river was clean and healthy. Students also write about their own community and how their lives effect the water and land.

CAREER DEVELOPMENT

Invite a geographer to the classroom to speak about how a community goes about cleaning up the environment or a developer to discuss the precautions they take around environmental impact when developing an area.

COMMUNITY

- Identify an area in the community that has recently been developed or an area that the class feels should be developed. Students include this in their writing. Students write to either support or oppose the development and support their position.

ASSESSMENTS

ACADEMIC CONTENT STANDARD

Evaluate students on their ability to:

- identify the text that describes the cleanliness of the Nashua River
- identify community water sources

WORKPLACE COMPETENCY

COMMUNICATION SKILLS: WRITING

Evaluate the students on their ability to write a clear statement using correct grammar, punctuation, etc. in the following areas:

- how people depend on the river/water sources
- how our lives effect the water and land

EXTENSION

- Explain how people use the Nashua.
- Create two questions pertaining to their community for the guest speaker to address.
- students initiate a community "clean up" with posters, informational brochures and create or decorate receptacles for recycling.

GEOGRAPHY

Academic Content Standard

6. Students apply knowledge of people, places, and environments to understand the past and present and to plan for the future.
   6.1 Students know how to apply geography to understand the past.

Workplace Competencies

GRADES K-4 BENCHMARKS	COMMUNICATION SKILLS Demonstrates the ability to receive and relay information clearly and effectively							ORGANIZATIONAL SKILLS Demonstrates skills to effectively and efficiently operate within a workplace							THINKING SKILLS Demonstrates the ability to use reasoning							TECHNOLOGY SKILLS Demonstrates the ability to work with a variety of technologies				WORKER QUALITIES Demonstrates the characteristics of an effective worker					
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a. describing how places change over time		●		●												●												
b. describing how places and environments may have influenced people and events over time		●		●						●	*		●			●												

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K-4

GRADE LEVEL

K 1 2 3 4 5 6 7 8 9 10 11 12

STATE STANDARD

6. Students apply knowledge of people, places, and environments to understand the past and present and to plan for the future.
   6.1 Students know how to apply geography to understand the past

BENCHMARK

b. describing how places and environments may have influenced people and events over time

WORKPLACE COMPETENCY

Organizational Skills: Evaluating
collects, evaluates and uses data to monitor and improve performance

RESOURCE/QUOTATION

Colorado Geographic Alliance (COGA):
COGA is a grass-roots effort of teachers university professors, administrators, and interested community members to improve geography education in Colorado.
Phone: 970/351-4620
Fax: 970/351-2890
Email: coga@bentley.unco.edu
Website: http://asweb.unco.edu/coga

GEOGRAPHY

LEARNING ACTIVITIES

ACADEMIC CONTENT STANDARD

The look of our land is changing. In groups of three or four, students define and examine the "sequent occupance" (refers to the changes that are made to an area or a landscape over time by successive groups of people) of a national park by evaluating the maps that show how the land has changed over time (contact the Colorado Geographic Alliance for sample maps).

WORKPLACE COMPETENCY

ORGANIZATIONAL SKILLS: EVALUATING

As a class, define and discuss the skill of evaluating. Have the students identify several examples of how and when this concept is used.

Divide the class into groups of three or four students and distribute maps. Ask each group of students to identify changes in land masses and formulate opinions as to why that changes may have occurred.

CAREER DEVELOPMENT/COMMUNITY

Invite a park ranger or government official to speak to the class about the environmental changes that have occurred over a period in a local, state or national park.

ASSESSMENTS

ACADEMIC CONTENT STANDARD

Evaluate students on their ability to:
- define "sequent occupance"
- theorize type of changes and reasons for such changes
- theorize the changes (man made, natural)

WORKPLACE COMPETENCY

ORGANIZATIONAL SKILLS: EVALUATING

Evaluate students on their ability to:
- identify and document differences in the maps
- speculate why there have been changes to vegetation, and the addition of roads and park related features
- identify how much of the land has changed over the last 50 years
- formulate an opinion about the changes (any benefits or detriments)
- identify an important change in the landscape in each time period and why it is important
- identify a possible alternative to one of the adaptations and its positive and negative aspects.

EXTENSION

Have students bring in old photographs of the community, school, or area. Such photographs may be available from local historical associations, community libraries, or elderly residents. Identify changes that have taken place since the photos were taken.

GRADES 5-8

III. INTEGRATION MATRICES AND CLASSROOM ACTIVITIES

INTEGRATING SCIENCE STANDARDS
WITH WORKPLACE COMPETENCIES

GEOGRAPHY

Academic Content Standard

1. Students know how to use and construct maps, globes, and other geographic tools to locate and derive information about people, places, and environments.
   1.3 Students know how to analyze the dynamic spatial organization of people, places, and environments.

Workplace Competencies

GRADES 5-8 BENCHMARKS	COMMUNICATION SKILLS: Demonstrates the ability to receive and relay information clearly and effectively							ORGANIZATIONAL SKILLS: Demonstrates skills to effectively and efficiently operate within a workplace					THINKING SKILLS: Demonstrates the ability to use reasoning						TECHNOLOGY SKILLS: Demonstrates the ability to work with a variety of technologies				WORKER QUALITIES: Demonstrates the characteristics of an effective worker					
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a. explaining fundamental geographic vocabulary such as the concepts of distance, latitude, longitude, interdependence, accessibility, and connections	●	●	●	●											*		●											
b. analyzing the factors affecting the location of human activities										●			●			●												
c. explaining different land use patterns in urban, suburban, and rural areas	●		●							●						●												
d. describing patterns and processes of diffusion										●						●												
e. solving locational questions requiring the integration of information from two or more sources		●							●				●		●	●					●							

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GRADE LEVEL

K 1 2 3 4 5 6 7 8 9 10 11 12

5-8

STATE STANDARD

1. Students know how to use and construct maps, globes, and other geographic tools to locate and derive information about people, places, and environments.
   1.3 Students know how to analyze the dynamic spatial organization of people, places, and environments

BENCHMARK

a. explaining fundamental geographic vocabulary such as the concepts of distance, latitude, longitude, interdependence, accessibility, and connections

WORKPLACE COMPETENCY

Thinking Skills: Learning
uses efficient techniques to acquire and apply new knowledge and skills

RESOURCE

"Here is your map. Unfold it, follow it, throw it away if you will. It is only paper and ink, but if you think a little, if you pause a moment, you will see these two things have seldom joined to make a document so modest and yet so full with histories of hopes and saga of conquest."

--Beryl Markham, West With the Night

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GEOGRAPHY

LEARNING ACTIVITIES

ACADEMIC CONTENT STANDARD

Students create a relief by drawing a shape onto a large piece of blue construction paper, cut it out, take a plain, white piece of paper and crumple it into a ball, straighten it back out and glue it down to the blue paper (leaving many of the wrinkles). Identify which parts of the paper represent the valleys, mountains, etc. Create a list of new vocabulary words and definitions to use as a key. Use this key to label the geographic features. Paint the area per the color coded geographic features key. Label it using basic geographic terms (as listed in benchmark a).

Have the students calculate distances to oceans, longitude and latitude of different geographic features of the United States in relation to Colorado.

WORKPLACE COMPETENCY

THINKING SKILLS: LEARNING

The class discusses strategies people use to learn new information. Students then identify the different learning styles and strategies and how each was used in the project. Through a series of questions and discussion, identify how the geographic features are relevant to our environment and how we use those features for business/ recreation.

CAREER DEVELOPMENT

Invite a geologist or an environmentalist into the classroom to discuss geographic features and career information.

COMMUNITY

Conduct a study walk and identify all geographic features in your community.

ASSESSMENTS

ACADEMIC CONTENT STANDARD

Evaluate the students on their ability to:

- identify the different geographic features
- label their maps accurately
- define new vocabulary words
- calculate distance
- define and demonstrate understanding of latitude and longitude

WORKPLACE COMPETENCY

THINKING SKILLS: LEARNING

Evaluate the students on their ability to:

- recognize and use learning techniques
- apply new and existing knowledge to new situations
- compare and contrast ideas to build understanding

EXTENSIONS

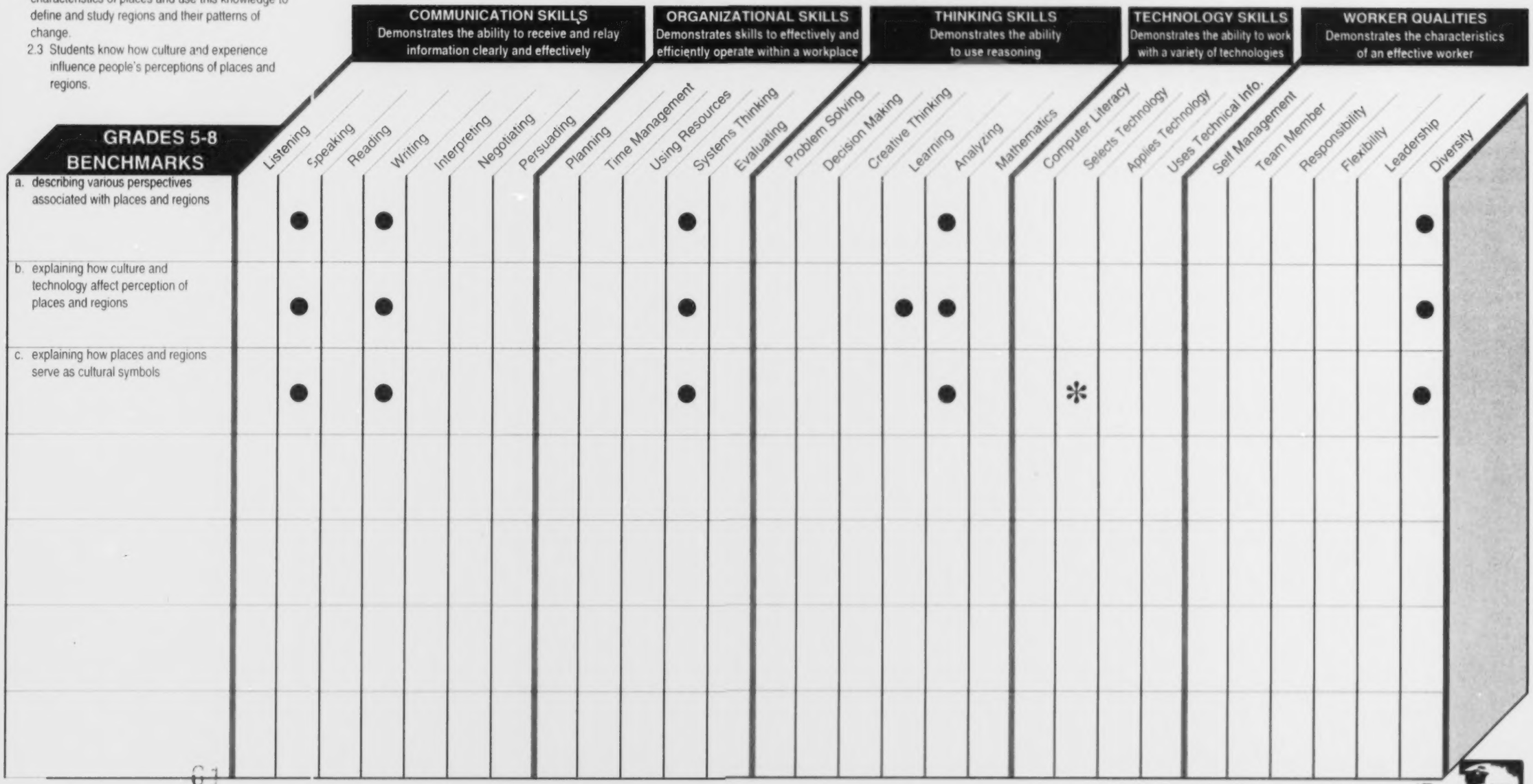
- Invite a geologist or water manager
- Invite a gemologist - pearls/diamonds/gold etc.
- Study trip to the great Sand Dunes

GEOGRAPHY

Academic Content Standard

2. Students know the physical and human characteristics of places and use this knowledge to define and study regions and their patterns of change.
   2.3 Students know how culture and experience influence people's perceptions of places and regions.

Workplace Competencies



GRADE LEVEL **5-8**

K 1 2 3 4 5 6 7 8 9 10 11 12

STATE STANDARD

2. Students know the physical and human characteristics of places and use this knowledge to define and study regions and their patterns of change.
   2.3 Students know how culture and experience influence people's perceptions of places and regions.

BENCHMARK

c. explaining how places and regions serve as cultural symbols

WORKPLACE COMPETENCY

Technology Skills: Selects technology chooses appropriate procedures, tools or equipment

RESOURCE

This project can be found in Mapping Out a Standards-based Framework for Geography, CCE, 1995.

GEOGRAPHY

LEARNING ACTIVITIES

ACADEMIC CONTENT STANDARD

Students research the current subject of Israel and the Pope's visit to the Holy Land (Jerusalem) in March, 2000. The student's research why the Jews and Palestinians both believe the land belongs to them. Students use all forms of technology and then the class is split into two groups. Both sides debate and provide a basis for why the Gaza Strip "rightfully" belongs to each religious sect. Each group makes a poster of the cultural symbols.

Each side provides evidence from a religious as well as an empirical point of view.

WORKPLACE COMPETENCY

TECHNOLOGY SKILLS: SELECTS TECHNOLOGY

The students brainstorm different types of technology. In small groups they impact discuss the impact technology has on their lives. The biggest impact of technology is one aspect that must be addressed during the debate.The students then present which technological device (televised news story, newspaper story, etc.) would best influence a non-biased party.

CAREER DEVELOPMENT

Discuss the possibility of printing the Kids' Community Guide in the local newspaper. Invite someone from the newspaper to speak to the class on the process for creating a community guide. Career information should also be shared.

COMMUNITY

Contact the Superintendent, a public relations officer, the visitors bureau, and the local news media for assist with the project.

ASSESSMENTS

ACADEMIC CONTENT STANDARD

Evaluate the students on their ability to:

- list 3 impacts of technology in their lives
- list 2 ways that technology effects geographical perspectives.

WORKPLACE COMPETENCY

TECHNOLOGY SKILLS: SELECTS TECHNOLOGY

Evaluate the students on their ability to:

- Identify several types of technology
- select appropriate technology for the task
- evaluate the appropriateness of the selected technology

EXTENSIONS

Students may want to collaborate with community resources to publish an actual guide.

GEOGRAPHY

Academic Content Standard

3. Students understand how physical processes shape Earth's surface patterns and systems.
   3.2 Students know the characteristics and distributions of physical systems of land, air, water, plants, and animals.

Workplace Competencies

GRADES 5-8 BENCHMARKS	COMMUNICATION SKILLS Demonstrates the ability to receive and relay information clearly and effectively							ORGANIZATIONAL SKILLS Demonstrates skills to effectively and efficiently operate within a workplace							THINKING SKILLS Demonstrates the ability to use reasoning							TECHNOLOGY SKILLS Demonstrates the ability to work with a variety of technologies				WORKER QUALITIES Demonstrates the characteristics of an effective worker					
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a. identifying the local and world patterns of ecosystems			●		●					*			●			●													
b. describing how ecosystems work		●	●							●						●													

GRADE LEVEL **5-8**

K 1 2 3 4 5 6 7 8 9 10 11 12

STATE STANDARD

3. Students understand how physical processes shape Earth's surface patterns and systems.
   3.2 Student's know the characteristics and distributions of physical systems of land, air, water, plants, and animals.

BENCHMARK

a. identifying the local and world patterns of ecosystems

WORKPLACE COMPETENCY

Organizational Skills: Systems Thinking understands the nature of systems, develops and adapts systems to meet organizational needs

RESOURCE

Ask a Geologist is a service provided by the U.S. Geological Survey. Each message goes to a different USGS earth scientist to provides answers to questions about: volcanoes, earthquakes, mountains, rocks, maps, ground water, lakes or rivers.

Website: www.walrus.wr.usgs.gov/docs/ask-a-ge.html

Email: Ask-a-Geologist@usgs.gov

GEOGRAPHY

LEARNING ACTIVITIES

ACADEMIC CONTENT STANDARD

As a class, define ecosystems and how they function. Discuss and research how the human development of a specific area effects the food chain. Compare the ecosystem in your community to another city of equal size in another country (land, air, water and plants).

As a class, identify the elements and characteristics of a system. Students are to take one of the ecosystems comparisons made and research and write a paragraph on how/why the ecosystem would change if you added or subtracted a specific element (such as a type of plant, a pollutant in the air or water, etc.). Students identify how recycling products effects the ecosystems (pros and cons).

WORKPLACE COMPETENCY

ORGANIZATIONAL SKILLS: SYSTEMS THINKING

Students discuss the concept of a system and identify several environmental systems. In small groups, students list elements of a system and apply this information to their paragraph.

CAREER DEVELOPMENT

As a class, explore the type of education, skills and interests that are important to be an earth scientist, through the "Ask-a-geologist" service. Career information should also be gathered.

COMMUNITY

Students research the type of recycling done in their community or school and identify how this effects the ecosystem. Organize and/or start a recycling program for the school.

ASSESSMENTS

ACADEMIC CONTENT STANDARD

Evaluate the students on their ability to:

- gather/research the information about ecosystems
- identify the effects on land, air, etc.
- compare and contrast between two places
- identify components of ecosystems.

WORKPLACE COMPETENCY

ORGANIZATIONAL SKILLS: SYSTEMS THINKING

Evaluate the students on their ability to:

- define a system
- identify elements of a system
- describe elements and their effects on ecosystems
- accurately provide information regarding systems within their paragraph.

EXTENSIONS

Students project future effects of human development on ecosystems (rain forest, land fills, etc.).

GEOGRAPHY

Academic Content Standard

4. Students understand how economical, political, cultural, and social processes interact to shape patterns of human populations, interdependence, cooperation, and conflict.
   4.1 Students know the characteristics, location, distribution, and migration of human populations.

Workplace Competencies

GRADES 5-8 BENCHMARKS	COMMUNICATION SKILLS: Demonstrates the ability to receive and relay information clearly and effectively							ORGANIZATIONAL SKILLS: Demonstrates skills to effectively and efficiently operate within a workplace				THINKING SKILLS: Demonstrates the ability to use reasoning						TECHNOLOGY SKILLS: Demonstrates the ability to work with a variety of technologies			WORKER QUALITIES: Demonstrates the characteristics of an effective worker					
	Listening	Speaking	Reading	Writing	Interpreting	Negotiating	Persuading	Planning	Time Management	Using Resources	Systems Thinking	Evaluating	Problem Solving	Decision Making	Creative Thinking	Learning	Analyzing	Mathematics	Computer Literacy	Selects Technology	Applies Technology	Uses Technical Info.	Self Management	Team Member	Responsibility	Flexibility	Leadership	Diversity
a. describing the demographic structure of a population	●		●							●						●												
b. explaining reasons for variations in population distribution	●		●	●						●		●				●												
c. analyzing the causes and types of human migration and its effect on places				●						●		●				●											*	

GRADE LEVEL **5-8**

K 1 2 3 4 5 6 7 8 9 10 11 12

STATE STANDARD

4. Students understand how economic, political, cultural, and social processes interact to shape patterns of human populations, interdependence, cooperation, and conflict.
   4.1 Students know the characteristics, location, distribution, and migration of human population

BENCHMARK

c. analyzing the causes and types of human migration and its effects on places

WORKPLACE COMPETENCY

Worker Qualities: Works with Diversity
accepts differences and works well with individuals from a variety of backgrounds and/or with divergent philosophies or ideas

RESOURCE

School-to-Work Resources for System Builders is a technical assistance resource guide compiled by the National Transition Alliance to facilitate the inclusion and participation of youth with disabilities in school-to-work systems.

National Transition Network
University of Minnesota
110 Pattee Hall
150 Pillsbury Drive SE
Minneapolis, MN 55455
612/624-2079
612/624-9344 (Fax)

GEOGRAPHY

LEARNING ACTIVITIES

ACADEMIC CONTENT STANDARD

Student research different ethnic groups' migration patterns over time and the geographical reasons for their migration. Students divide into groups of 3-5 and the teacher distributes data, photographs, news clippings regarding immigrants throughout history and in many contexts. Students work with the data - look for patterns, identify "push/pull" factors and benefits/burdens to the United States and home country, raise questions, correlate the graphic data with a timeline. Students then present to the class what they know about "push/pull" factors and the cause and effect of the migration. Analysis of the migration groups should be based on examining maps and other data as well as other research.

WORKPLACE COMPETENCY

WORKER QUALITIES: WORKS WITH DIVERSITY

Students discuss the diversity among their classmates. (This can include eye color, hair color, height, etc.). Students then identify the pros and cons to having a diverse classroom. Students determine the impact diversity has on migration patterns.

CAREER DEVELOPMENT

Students explore what a cultural geographer does or someone who works with immigrants. Students investigate the types of skills, education, and interests that are important.

COMMUNITY

Students create a poster showcasing migrating groups to be put on display in the library. All groups researched above will be included with facts, similarities and differences. Students use pictures and/or graphics to illustrate.

ASSESSMENTS

ACADEMIC CONTENT STANDARD

Evaluate the students on their ability to:
- provide a thorough and thoughtful presentation
- accurately reflect the information
- demonstrate foundational knowledge of important issues related to immigration
- support claims with reasons or evidence.

WORKPLACE COMPETENCY

WORKER QUALITIES: WORKS WITH DIVERSITY

Evaluate the students on their ability to:
- recognize characteristics that make us diverse
- identify 5 advantages to having a diverse classroom
- understand the positive and negative impacts diversity has on migration

EXTENSIONS

- From their research, students list the similarities and differences between themselves and the group researched. The teacher and students discuss the concept of diversity. Students determine what assistance a teenager from the group they researched would need to adapt to their community. Students present this information to the class.
- How has immigration influenced American national identity? have students create diversity posters to be put on display in the media center. Students will use pictures, maps, graphics, news articles.
- At the end of the unit, students should identify their feelings on immigration reform and diversity issues. Students will advocate a position with their reasoning to an individual or group that influences policy regarding immigration or diversity.

GEOGRAPHY

Academic Content Standard

5. Students understand the effects of interactions between human and physical systems and the changes in meaning, use, distribution, and importance of resources.
   5.2 Students know how physical systems affect human systems.

Workplace Competencies

GRADES 5-8 BENCHMARKS	COMMUNICATION SKILLS: Demonstrates the ability to receive and relay information clearly and effectively							ORGANIZATIONAL SKILLS: Demonstrates skills to effectively and efficiently operate within a workplace					THINKING SKILLS: Demonstrates the ability to use reasoning							TECHNOLOGY SKILLS: Demonstrates the ability to work with a variety of technologies				WORKER QUALITIES: Demonstrates the characteristics of an effective worker					
	Listening	Speaking	Reading	Writing	Interpreting	Negotiating	Persuading	Planning	Time Management	Using Resources	Systems Thinking	Evaluating	Problem Solving	Decision Making	Creative Thinking	Learning	Analyzing	Mathematics	Computer Literacy	Selects Technology	Applies Technology	Uses Technical Info.	Self Management	Team Member	Responsibility	Flexibility	Leadership	Diversity
a. explaining how the characteristics of different physical environments provide opportunities for or place constraints on human activities	●		●	*						●		●				●												
b. describing how natural hazards affect human activities	●		●							●						●												

GRADE LEVEL **5-8**

K 1 2 3 4 5 6 7 8 9 10 11 12

STATE STANDARD

5. Students understand the effects of interactions between human and physical systems and the changes in meaning, use, distribution, and importance of resources
   5.2 Students know how physical systems affect human systems

BENCHMARK

a. explaining how the characteristics of different physical environments provide opportunities for or place constraints on human activities

WORKPLACE COMPETENCY

Communication Skills: Interpreting delineates and analyzes oral and written information and synthesizes information into a conclusion

RESOURCE

"A hazard becomes a disaster when it occurs where people live."
-Joe Golden, NOAA meteorologist

Web sites:

- Extreme Weather Sourcebook: http://www.dir.ucar.edu/esig/HP_roger/sourcebook
- Federal Emergency Management Agency: www.fema.gov
- National Geographic Society: www.nationalgeographicsociety.com
- Atlantic Oceanographic and Meteorological Laboratory: www.aoml.noaa.gov/hrd/
- National Climatic Data Center: http://www.ncdc.noaa.gov/ol/climate/climateresearch.html
- National Environmental Satellite, Data, and Information Service: http://ns.noaa.gov.NESDIS/NESDIS_Home.html
- National Hurricane Center: www.nws.noaa.gov
- National Severe Storms Laboratory: www.nssl.noaa.gov
- National Weather Service: www.nws.noaa.gov
- Storm Prediction Center: www.spc.noaa.gov
- Natural Hazards Center: http://www.colorado.edu/hazards
- USGS Earth Science Information Center www.usgs.gov/education
- Useful weather information: http://bluesky.es.sprl.umich.edu

Spring 1999, "Natural Hazards," Update, Geography Education Outreach, National Geographic Society.

GEOGRAPHY

LEARNING ACTIVITIES

ACADEMIC CONTENT STANDARD

Give students a blank outline map of North America and ask them one by one to mark with a pencil where they think different natural hazards exist (e.g., volcanoes, hurricanes and tornadoes, hailstorms and drought). Prepare overhead transparencies of North America with different natural hazards using the National Geographic map supplement (National Geographic, July 1998 supplement "Natural Hazards of North America.") Ask students to check their predictions with the overhead.

Using the same National Geographic map supplement, ask students to make generalizations about population density patterns they see. Provide groups of 3 to 4 students with an overhead transparency of North America. Ask them to supply the population data and shade the overhead with population patterns (Use three colors for high density (250/sq. mi.), medium (25-249/sq. mi.), and low (24/sq. mi./below).) Ask students to lay the completed density transparency on the natural hazards transparency. Discuss why people choose to live along unstable coastlines, on barrier islands, on river floodplains, on volcanic debris, and on unstable fault lines?

WORKPLACE COMPETENCY

COMMUNICATION SKILLS: INTERPRETING

The class discusses the concept of interpreting. The class brainstorms strategies that are used to interpret information and identify/give some career areas where interpreting information is utilized. Student teams discuss and record their ideas about density patterns and reasons for these patterns.

CAREER DEVELOPMENT

Invite a meteorologist into class to speak about natural hazards. Invite someone from FEMA to speak to the class about emergency preparedness in the case of a natural disaster as well as careers.

COMMUNITY

Students locate a river and identify the human demands on the river. Students research how man has modified the river to meet these demands.

ASSESSMENTS

ACADEMIC CONTENT STANDARD

Evaluate the students on their ability to:

- use current knowledge to interpret/analyze the location of certain natural hazards
- identify limitations and positive aspects of different types of land
- research population density patterns and form opinions as to the reasons for these patterns.

WORKPLACE COMPETENCY

COMMUNICATION SKILLS: INTERPRETING

Evaluate the students on their ability to:

- identify at least three strategies used in interpreting data
- synthesize their ideas as a group and identify reasons for population patterns.
- identify three career areas that use this skill and examples.

EXTENSION

Research your own community's disaster response plan. Contact officials in charge of local emergency preparedness. If your town has no such office, consult the bureau in your state capitol that handles these affairs. Or visit the Web site of the Federal Emergency Management Agency (FEMA) for local contacts: www.fema.gov/about/regoff.htm

Families may examine their own families' preparedness for emergencies. Does your family have an emergency response plan? Do they have a well-supplied safety list? (flashlight, radio, batteries, canned food, can opener, first-aid kit, fresh drinking water, tools)

GEOGRAPHY

Academic Content Standard

6. Students apply knowledge of people, places, and environments to understand the past and present and to plan for the future.
   6.2 Students know how to apply geography to understand the present and plan for the future.

Workplace Competencies

GRADES 5-8 BENCHMARKS	COMMUNICATION SKILLS: Demonstrates the ability to receive and relay information clearly and effectively							ORGANIZATIONAL SKILLS: Demonstrates skills to effectively and efficiently operate within a workplace					THINKING SKILLS: Demonstrates the ability to use reasoning							TECHNOLOGY SKILLS: Demonstrates the ability to work with a variety of technologies				WORKER QUALITIES: Demonstrates the characteristics of an effective worker					
	Listening	Speaking	Reading	Writing	Interpreting	Negotiating	Persuading	Planning	Time Management	Using Resources	Systems Thinking	Evaluating	Problem Solving	Decision Making	Creative Thinking	Learning	Analyzing	Mathematics	Computer Literacy	Selects Technology	Applies Technology	Uses Technical Info.	Self Management	Team Member	Responsibility	Flexibility	Leadership	Diversity
a. explaining issues in communities from a spatial perspective		●		●						●						●	●											
b. explaining a contemporary issue using geographic knowledge, skill and perspectives		●		●					*				●		●	●												

BEST COPY AVAILABLE

GRADE LEVEL **5-8**

K 1 2 3 4 5 6 7 8 9 10 11 12

STATE STANDARD

6. Students apply knowledge of people, places, and environments to understand the past and present and to plan for the future.
   6.2 Students apply knowledge of people, places, and environments to understand the past and present and to plan for the future.

BENCHMARK

b. explaining a contemporary issue using geographic knowledge, skill and perspectives

WORKPLACE COMPETENCY

Organizational Skills: Using Resources
identifies, organizes, plans and allocates resources

RESOURCE

"2000 World Population Data Sheet" (available from the Population Reference Bureau: Tel: (202) 483-1100; e-mail: popref@prb.orb)
"World Population Prospects: The 2000 Revision," UN Population Division http://www.popir.org/pop2000/
October 1998 National Geographic supplement titled "Population: Millennium in Maps"
Population reference Bureau's (PRB) project "The World of Child 6 Billion" examines issues that will face the hypothetical child who brings world population to 6 billion. For more information visit PRB at www.prb.org
Spring 1999, "The World of Child 6 Billion," Update, Geography Education Outreach, National Geographic Society.

LEARNING ACTIVITIES

ACADEMIC CONTENT STANDARD

Population projections by country help create an understanding of the number of people in different age groups who will need such things as health care services, schooling, new jobs, and housing. Such projections are part of the information base that informs public policy. Regroup students into eight groups and assign each group one of the following countries: Australia, Bangladesh, Botswana, Brazil, Italy, Mali, Nicaragua, Saudi Arabia. Ask groups to prepare long range policy recommendations for presentation to the government of their assigned country. They should address topics such as health and nutrition, environment, housing, education, and employment. Students should identify assumptions upon which their recommendations are based. Each assumption should include a rationale and supporting data that may be presented in a chart, graph, or map. Each group should present to the class, who will act as the governing body, raising questions or challenging assumptions.

WORKPLACE COMPETENCY

ORGANIZATIONAL SKILLS: USING RESOURCES

Students identify resources to support their research and use a variety of resources. Students gather information and make some assumptions based on their research and topic areas. Students record each assumption/idea and the supporting data. Students identify career areas that gather and utilize similar resources.

CAREER DEVELOPMENT/COMMUNITY

Invite someone from the census bureau to speak to the class about the history, and reasons for gathering demographics. Careers can be highlighted from the census data in their state or community.

ASSESSMENTS

ACADEMIC CONTENT STANDARD

Evaluate the students on their ability to:
- gather useful data in each of the topic areas that relate to the geographic area

WORKPLACE COMPETENCY

ORGANIZATIONAL SKILLS: USING RESOURCES

Evaluate the students on their ability to:
- identify and utilize several possible resources
- use data to drive and support their assumptions.

EXTENSIONS

Agencies other than the UN make projections for planning purposes. Students can visit the U.S. Census Bureau Web site www.census.gov to learn about population projections for their state. Or they might contact the city or county planning commission to find out how population projections affect decision-making at the local level.

GRADES 9-12

III. INTEGRATION MATRICES AND CLASSROOM ACTIVITIES

INTEGRATING SCIENCE STANDARDS
WITH WORKPLACE COMPETENCIES

GEOGRAPHY

Academic Content Standard

1. Students know how to use and construct maps, globes, and other geographic tools to locate and derive information about people, places, and environments.
   1.1 Students know how to use maps, globes, and other geographic tools to acquire, process, and report information from a spatial perspective.

Workplace Competencies

GRADES 9-12 BENCHMARKS	COMMUNICATION SKILLS Demonstrates the ability to receive and relay information clearly and effectively							ORGANIZATIONAL SKILLS Demonstrates skills to effectively and efficiently operate within a workplace					THINKING SKILLS Demonstrates the ability to use reasoning							TECHNOLOGY SKILLS Demonstrates the ability to work with a variety of technologies				WORKER QUALITIES Demonstrates the characteristics of an effective worker					
	Listening	Speaking	Reading	Writing	Interpreting	Negotiating	Persuading	Planning	Time Management	Using Resources	Systems Thinking	Evaluating	Problem Solving	Decision Making	Creative Thinking	Learning	Analyzing	Mathematics	Computer Literacy	Selects Technology	Applies Technology	Uses Technical Info.	Self Management	Team Member	Responsibility	Flexibility	Leadership	Diversity
a. selecting appropriate maps, map projections, and other graphic representations to analyze geographic problems				●					●			●				●	●											
b. constructing maps using fundamental cartographic principles including translating narratives about places and events into graphic representations				●												●	●											
c. interpreting maps and other geographic tools, through the analysis of case studies and using data				●				✻	●							●												
d. using geographic tools to represent and interpret Earth's physical and human systems									●	●		●				●												

GRADE LEVEL

K 1 2 3 4 5 6 7 8 9 10 11 12 **9-12**

STATE STANDARD

1. Students know how to use and construct maps, globes, and other geographic tools to locate and derive information about people, places, and environments.
   1.1 Students know how to use maps, globes, and other geographic tools to acquire, process, and report information from a spatial perspective.

BENCHMARK

c. interpreting maps and other geographic tools, through the analysis of case studies and using data

WORKPLACE COMPETENCY

Organizational Skills: Time Management applies appropriate time to task and manages multiple priorities

RESOURCE

"A map says to you, 'Read me carefully, doubt me not.' It says 'I am the earth in the palm of your hand. Without me you are alone and lost."

-Beryl Markham, West With the Night

The Association of American Geographers (AAG) is a 94 year old non-profit organization founded in Philadelphia in 1994 that advances professional studies in geography and encourages the application of geographic research in education, government, and business. Through the Geographic Education National Implementation Project (GENIP), the AAG works with the National Council for Geographic Education, the National Geographic Society, and the American Geographical Society to improve geographic education in elementary and secondary schools.

The Association of American Geographers (AAG)
1710 16th Street NW
Washington, DC 20009-3198
202/234-1450
202/234-2744 (fax)
gaia@aag.org (email)
http://www.aag.org

GEOGRAPHY

LEARNING ACTIVITIES

ACADEMIC CONTENT STANDARD

Students are assigned their dream job. Part of their requirement for their job is to travel to four cities of their choice to present at a conference. All four cities have to be visited in two weeks. Each student is given a new car of their choice to drive to each of the four cities. Students design the most efficient route by looking at highway maps of the country to figure out their route including rest stops along the way and the length of stay at each stop.

Students have to visit all four cities within one month and use mathematics to figure out how many miles per hour they can travel, estimating the distance they can drive in one day.

WORKPLACE COMPETENCY

ORGANIZATIONAL SKILLS: TIME MANAGEMENT

Teacher discusses time management and the class brainstorms on how they use time management in their daily lives. The class discusses how time management will be used in this assignment.

CAREER DEVELOPMENT

Invite a travel agent to review how they choose routes for their clients.

COMMUNITY

- Travel is a large part of many of today's careers. Planning business trips is a growing area in business. Students can question family, family friends, and family adults regarding travel and careers.
- Visit a AAA or Travel Agency to learn about the different skills that this job entails.

ASSESSMENTS

ACADEMIC CONTENT STANDARD

Evaluate the students on their ability to:

- trace their route on a map (using a highlighter)
- mark rest stops and overnight stops of their trip
- mathematically plan distances traveled per day

WORKPLACE COMPETENCY

ORGANIZATIONAL SKILLS: TIME MANAGEMENT

Evaluate the students on their ability to:

- accurately figure out the monthly schedule (including mileage, distance, speed limit, etc) to get to their destinations
- realistically plan the route (time needed) for the four cities
- identify 3 areas where time management is used in daily life.

EXTENSIONS

- Students complete a budget for the trip.
- Students research the cities they are going to visit.

GEOGRAPHY

Academic Content Standard

2. Students know the physical and human characteristics of places and use this knowledge to define and study regions and their patterns of change.
   2.1 Students know the physical and human characteristics of places.

Workplace Competencies

GRADES 9-12 BENCHMARKS	COMMUNICATION SKILLS Demonstrates the ability to receive and relay information clearly and effectively							ORGANIZATIONAL SKILLS Demonstrates skills to effectively and efficiently operate within a workplace						THINKING SKILLS Demonstrates the ability to use reasoning						TECHNOLOGY SKILLS Demonstrates the ability to work with a variety of technologies				WORKER QUALITIES Demonstrates the characteristics of an effective worker					
	Listening	Speaking	Reading	Writing	Interpreting	Negotiating	Persuading	Planning	Time Management	Using Resources	Systems Thinking	Evaluating	Problem Solving	Decision Making	Creative Thinking	Learning	Analyzing	Mathematics	Computer Literacy	Selects Technology	Applies Technology	Uses Technical Info.	Self Management	Team Member	Responsibility	Flexibility	Leadership	Diversity
a. analyzing the human and physical characteristics that give a place meaning and significance				●		*				●				●		●												
b. describing the changing human and physical characteristics of places		●		●						●						●												

GRADE LEVEL

K 1 2 3 4 5 6 7 8 9 10 11 12 **9-12**

STATE STANDARD

2. Students know the physical and human characteristics of places and use this knowledge to define and study regions and their patterns of change.
   2.1 Students know the physical and human characteristics of places.

BENCHMARK

a. analyzing the human and physical characteristics that give a place meaning and significance

WORKPLACE COMPETENCY

Communication Skills: Persuading
communicates ideas to justify position, overcomes resistance and convinces others

RESOURCE

This activity can be found on the CDE website at:
www.cde.state.co.us Standards in Action "Bid for the 2004 Summer Olympics" by Jennifer Rocke, teacher, Skyview High School, Adams 1 School District.

The American Geological Institute (AGI) is a nonprofit federation of 31 geoscientific and professional associations that represent more than 100,000 geologists, geophysicists, and other earth scientists. Founded in 1948, AGI provides information services to geoscientists, serves as a voice of shared interests in our profession, plays a major role in strengthening geoscience education, and strives to increase public awareness of the vital role the geosciences play in mankind's use of resources and interaction with the environment.

American Geological Institute
4220 King Street
Alexandria, VA 22302-1502
703/379-2480
703/379-7563 (fax)
agi@agiweb.org (email)
http://www.agiweb.org/agi/agi.html

GEOGRAPHY

LEARNING ACTIVITIES

ACADEMIC CONTENT STANDARD

The Olympic Games have the power to transform a town, city, and country. However, certain social, political, economic, and physical structures must pre-exist within a city and are contingent for a city being awarded the Olympic Games. The effect of the transformation, both human and physical, are felt by the city long after the games are over. Groups of students pick a city and they research in the library with their final goal in mind – to bid their chosen city against other cities for the 2004 Summer Olympic Games.

Each group presents to the class a bid book and a proposal for their city. Students will create both topographical and a venue map of the city. In the process of creating the bid book, their final assessment, they will learn about the social, economic, technical and political forces which intertwine on a global scale and which drive the selection of a city winning the Olympic bid.

WORKPLACE COMPETENCY

COMMUNICATION SKILLS: PERSUADING

Class discusses the aspects of persuasion and includes these new skills in their presentation to persuade the Olympic committee that their city is the best to host that season's Olympics.

CAREER DEVELOPMENT/COMMUNITY

Invite a speaker from the Olympic Committee in Colorado Springs to speak to the class. Invite a marketing agent to speak to the class about how to put together a presentation booklet.

ASSESSMENTS

ACADEMIC CONTENT STANDARD

Evaluate the students on their ability to:
- thoroughly research a particular city
- identify the city's human and physical characteristics
- present the information in an organized manner.

WORKPLACE COMPETENCY

COMMUNICATION SKILLS: PERSUADING

Evaluate the students on their ability to:
- identify the aspects of persuasion
- include these aspects in their presentation
- provide facts and statistics to justify/support their position.

EXTENSIONS

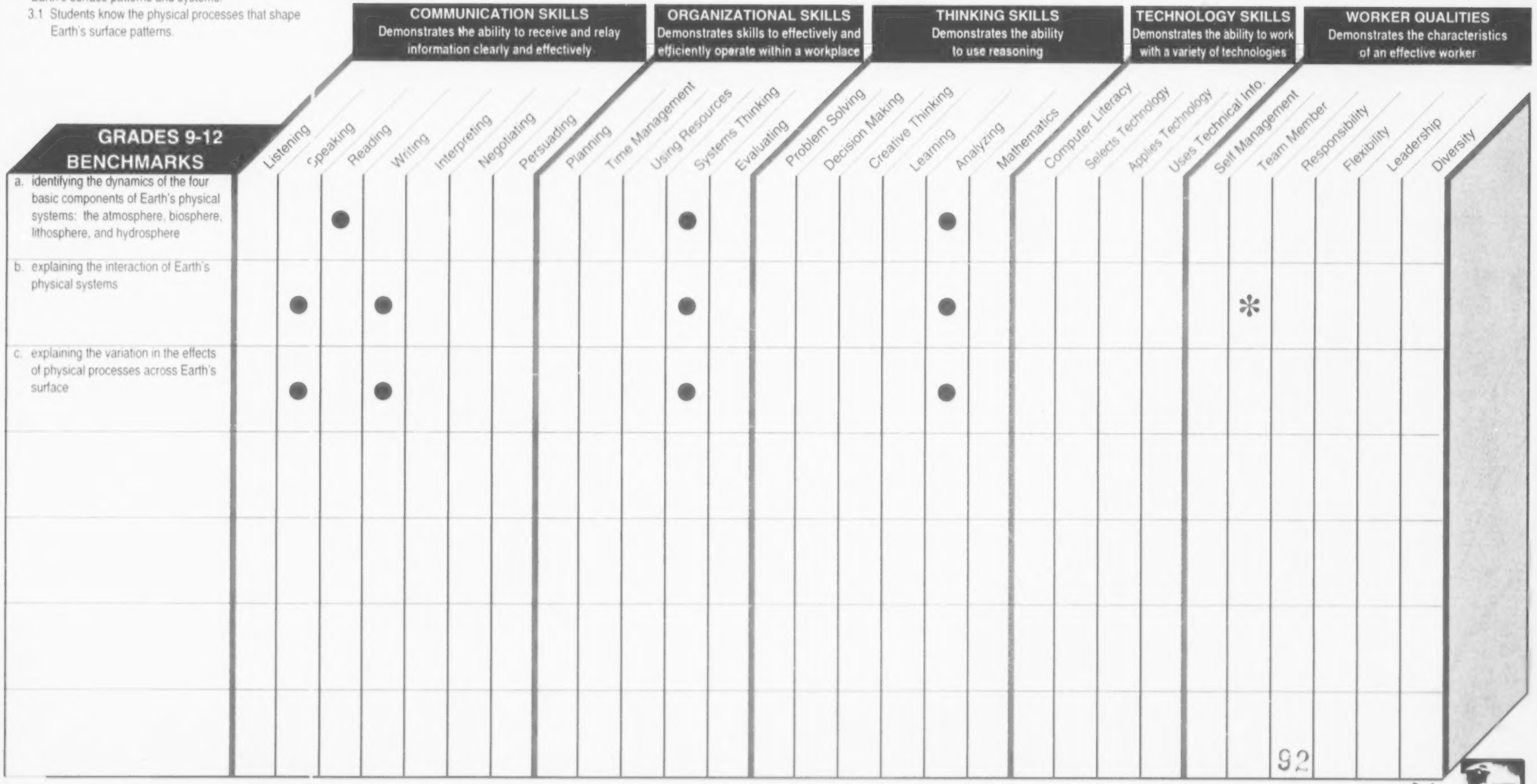
- Incorporate an Olympic math project (http://www.youth.net).
- Students may create their bid presentation in a multimedia format. Students may combine the use of scanners, digital cameras, sound, "Linkway Live" or Hypercard" and Microsoft Works." Teachers should point out the fact that the Atlanta bid was awarded mainly for their advancement in technology. Essentially students will be simulating what the members of the Atlanta bid committee presented to the IOC (International Olympic Committee).
- Students participate in a virtual Olympics, the "Olympic Teleconnection" (http://www.olympics.youth.net).

GEOGRAPHY

Academic Content Standard

3. Students understand how physical processes shape Earth's surface patterns and systems.
   3.1 Students know the physical processes that shape Earth's surface patterns.

Workplace Competencies



GRADE LEVEL **9-12**

K 1 2 3 4 5 6 7 8 9 10 11 12

STATE STANDARD

3. Students understand how physical processes shape Earth's surface patterns and systems.
   3.1 Students know the physical processes that shape Earth's surface.

BENCHMARK

b. explaining the interaction of Earth's physical systems

WORKPLACE COMPETENCY

Worker Qualities Skills: Team Member contributes to group effort through cooperation and consensus

RESOURCE

Ask a Geologist is a service provided by the U.S. Geological Survey. Each message goes to a different USGS earth scientist to provides answers to questions about: volcanoes, earthquakes, mountains, rocks, maps, ground water, lakes or rivers.

Website: www.walrus.wr.usgs.gov/docs-ask-a-ge.html

Email: Ask-a-Geologist@usgs.gov

GEOGRAPHY

LEARNING ACTIVITIES

ACADEMIC CONTENT STANDARD

Rajasthan, a province near the Thar Desert in India is proposing to embark on an ambitious program of agricultural expansion. Negotiations are presently underway with the World Bank which, if successful will secure enough money for a large scale investment in irrigation. It has already been established that Rajasthan has large reserves of quality ground water. However, it is an unfortunate fact that much of Rajasthan's existing agricultural land suffers salinization and is prone to pipe erosion.

The National Board of Economic Development and the World Bank agree that Rajasthan should be preceded by a complete resource inventory and that a survey of Rajasthan's soils and their agricultural development be implemented. There is insufficient expertise in Rajasthan to conduct such a survey. However, several foreign countries have offered to send in a soil survey team to do the job.

Develop a poster that outlines the structure and character of the proposed soil survey. It may be supplemented by illustrations.

WORKPLACE COMPETENCY

WORKER QUALITIES: TEAM MEMBER

The survey team consists of four scientists. Each group of four must identify their strengths (both group and individual and how those will work for or against the group) to thoroughly research and present their findings.

CAREER DEVELOPMENT/COMMUNITY

- Invite a physical geographer to help in the study of soil systems (pedology). Have him speak on soil structure, soil texture, soil color, and soil classification systems and discuss the varied careers a physical geographer may attain.

ASSESSMENTS

ACADEMIC CONTENT STANDARD

Evaluate the students on their ability to:
- identify the characteristics and structure of the survey
- use illustrations to clarify points of the survey

WORKPLACE COMPETENCY

WORKER QUALITIES: TEAM MEMBER

Evaluate the students on their ability to:
- work together while sharing information and expertise when appropriate
- identify why teamwork is necessary for this activity and three other jobs where teamwork is used
- identify 3 elements of an effective leader.

EXTENSIONS

- Soil surveys have been conducted in most counties of the United States by the U.S. Department of Agriculture Soil and Conservation Service (SCS). If you consult you local office to discover the characteristics and potential uses and limitations of your local soils, you will probably be surprised by their variability.

Birkland, Peter. Soils and Geomorphology. New York: Oxford University Press, 1984.
Foth, Henry D. Fundamentals of Soil Science. (New York: John Wiley, 1984.

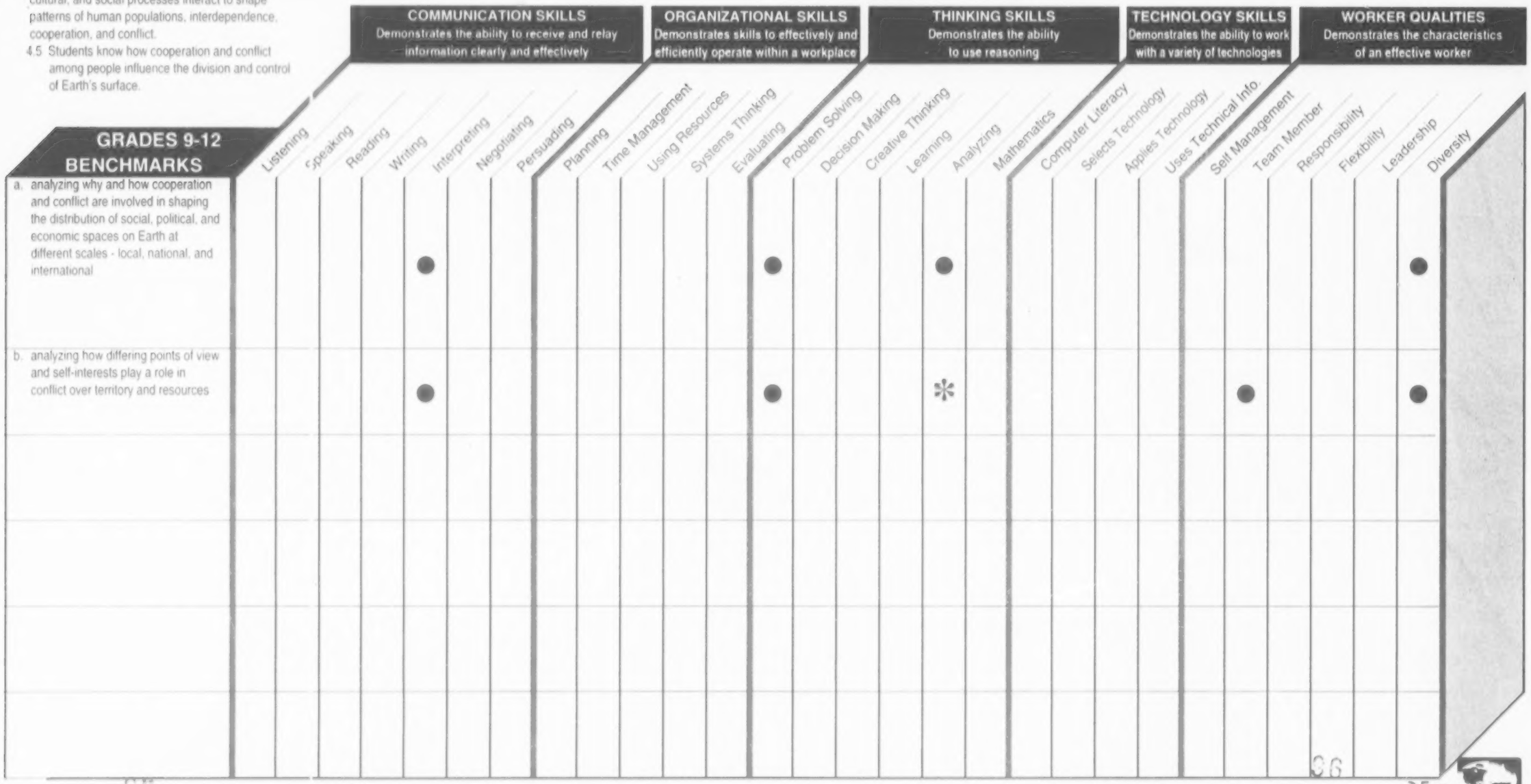
GEOGRAPHY

Academic Content Standard

4. Students understand how economical, political, cultural, and social processes interact to shape patterns of human populations, interdependence, cooperation, and conflict.

4.5 Students know how cooperation and conflict among people influence the division and control of Earth's surface.

Workplace Competencies



GRADE LEVEL

9-12

K 1 2 3 4 5 6 7 8 9 10 11 12

STATE STANDARD

4. Students understand how economic, political, cultural, and social processes interact to shape patterns of human populations, interdependence, cooperation, and conflict

4.5 Students know how cooperation and conflict among people influence the division and control of Earth's surface.

BENCHMARK

b. analyzing how differing points of view and self-interests play a role in conflict over territory and resources

WORKPLACE COMPETENCY

Thinking Skills: Analyzing
identifies bias of information sources, evaluates contradictory information and effectively manages information

RESOURCE

This site provides a brief history of NATO, links to member countries, the text of the North Atlantic Treaty and information on current issues such as admissions of new members. There is also information on the different organizations that make up NATO.

The North Atlantic Treaty Organization (NATO)
www.nato.int/welcome/home.htm

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GEOGRAPHY

LEARNING ACTIVITIES

ACADEMIC CONTENT STANDARD

You are a member of a task force that has been formed by the Council of Europe to examine the roles that both NATO and the EU play in providing peace and security for Europe, and to consider the potential eastward enlargement. The Council will hold a hearing listening to the various perspectives. Students are briefed to represent the different viewpoints over a period of weeks. Make very clear the form and the timetable of the various presentations and reports. Be specific about the role the students take and how they will be assessed. Well before the first session of the presentation meet with the chair and other students playing the Council of Europe. Lay out the room and bring the formality and form of the proceedings.

The Council of Europe requires you to develop an Expansion Recommendation. You must decide whether eastward expansion of NATO or the EU will more effectively promote peace and stability in the region. You must give specific reasons to justify and defend your decision. Your rationale can include reasons for not recommending the expansion of one organization as well as positive reasons to support your choice.

WORKPLACE COMPETENCY

THINKING SKILLS: ANALYZING

Students identify the skills needed in analyzing. Bias and personal experiences should be included in this discussion.

CAREER DEVELOPMENT/COMMUNITY

- Students must identify specific examples of how the skill of analyzing is used in this activity and in three other career areas. Careers in international services can also be discussed and researched.

- Ask a geographer or a former diplomat to speak to the class on geo-politics and careers in this area.

ASSESSMENTS

ACADEMIC CONTENT STANDARD

Evaluate the students on their ability to:

- explain the roles of NATO and the EU in Europe
- explain the roles of small interest groups on local, state, federal and world shape policies
- identify two perspectives that are conflictual
- describe how decisions are made when groups differ in their opinions
- determine several methods that bring cooperation from conflict.

WORKPLACE COMPETENCY

THINKING SKILLS: ANALYZING

Evaluate the students on their ability to:

- study information and come to a logical conclusion
- identify bias sources
- evaluate contradictory sources.

EXTENSIONS

Students create a timeline reflective on the history of NATO and present orally, graphically or dramatically specific world events that NATO has influenced.

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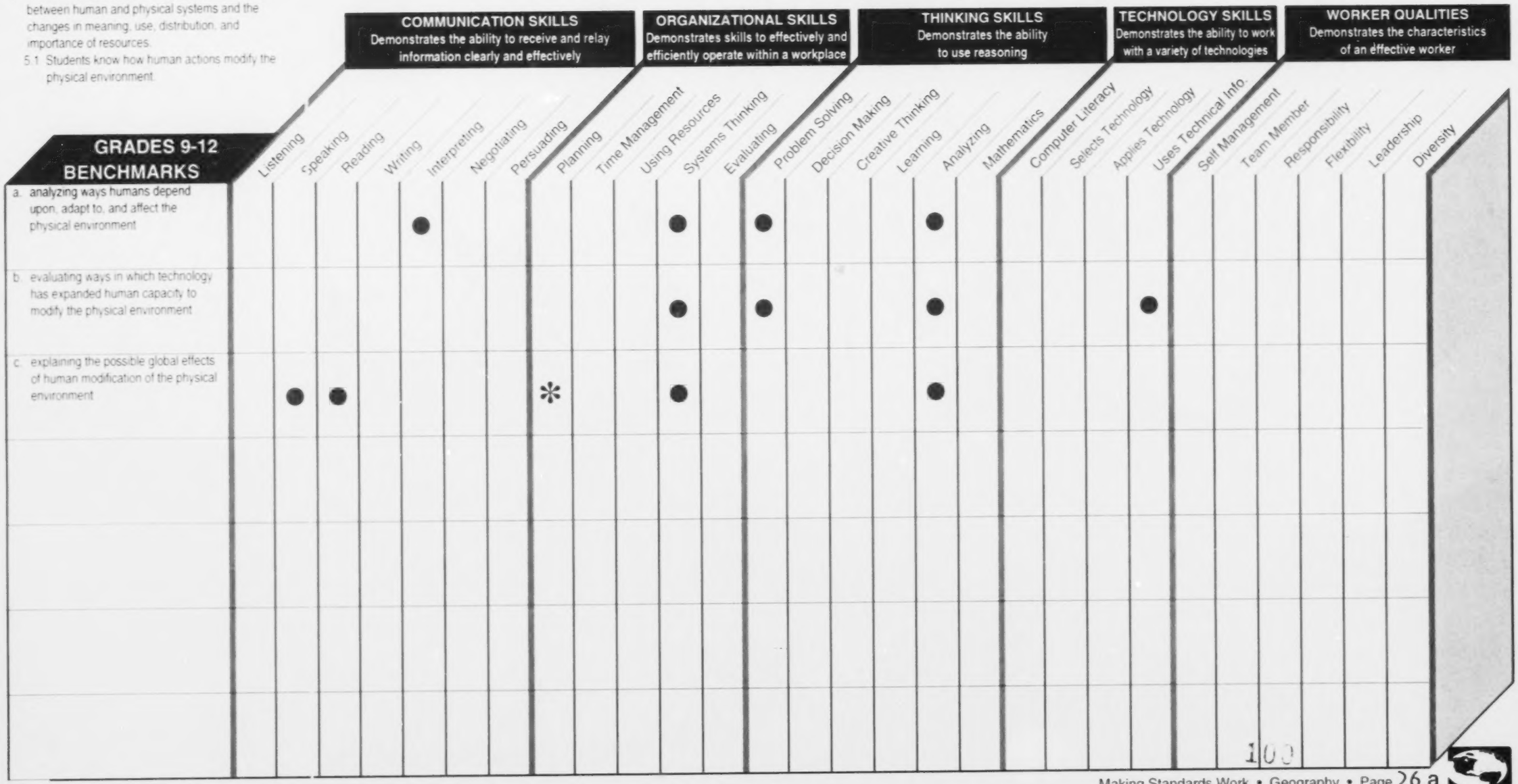
GEOGRAPHY

Academic Content Standard

5. Students understand the effects of interactions between human and physical systems and the changes in meaning, use, distribution, and importance of resources.
   5.1 Students know how human actions modify the physical environment.

Workplace Competencies



GRADE LEVEL

K 1 2 3 4 5 6 7 8 9 10 11 12

9-12

STATE STANDARD

5. Students understand the effects of interactions between human and physical systems and the changes in meaning, use, distribution, and importance of resources
   5.1 Students know how human actions modify the physical environment.

BENCHMARK

c. explaining the possible global effects of human modification of the physical environment

WORKPLACE COMPETENCY

Organizational Skills: Planning
devises and outlines a process to achieve a goal and timeline

QUOTATIONS & PARTNERSHIPS

The Natural Resources Conservation Service is a Federal agency that works in partnership with the American people to conserve and sustain our natural resources.

Natural Resources Conservation Service
Attn: Conservation Communication Staff
P.O. Box 2890
Washington, DC 20013
www.nrcs.usda.gov

The United Nations: **www.un.org**

Full Performance Assessment can be found on CDE web site **www.cde.state.co.us, Standards in Action, developed by Tony Hurt, teacher, Heritage High School, Littleton Public Schools - use this for the professional assessment on page 287 (of CDE website)**

GEOGRAPHY

LEARNING ACTIVITIES

ACADEMIC CONTENT STANDARD

The establishment of the United Nations Commission on Sustainable Development occurred as a result of the 1992 United Nations Conference on Environment and Development (UNCED, also called Earth Summit). The UNCED resulted in a number of International agreements to move the world towards a more sustainable future. These included international conventions on climate and bio-diversity, as well as Agenda 21, a detailed blueprint of global action on sustainable development.

You will examine sustainable development in sub-Saharan Africa as a member of the United Nations Commission on Sustainable Development. In this capacity you must examine the profiles of six sub-Saharan countries and your report must include specific reasons for your ranking. The United Nations Commission on Sustainable Development requires you to develop recommendations for the one country that you have identified as the least sustainable and for the one country that is the most sustainable. For these countries you must identify three specific policies that need to be designed in order to move them toward a more sustainable future. Each policy should address a different issue, and you should briefly elaborate on each of these policies.

WORKPLACE COMPETENCY

ORGANIZATIONAL SKILLS: PLANNING

Students brainstorm the steps in planning. They discuss how they use a system of planning in school and at home. The planning process is applied to the lesson.

CAREER DEVELOPMENT/COMMUNITY

Invite a speaker from the agricultural extension service or a geographer from a local university to talk about sustainable development and career skills needed.

ASSESSMENTS

ACADEMIC CONTENT STANDARD

Evaluate the students on their ability to:
- identify developments in Africa
- identify global effects of these
- analyze the effectiveness of their planning
- develop recommendations based on data and human modifications.

WORKPLACE COMPETENCY

ORGANIZATIONAL SKILLS: PLANNING

Evaluate the students on their ability to:
- identify a goal
- determine steps to reach their goal
- make mid-course correction.

EXTENSIONS

Commission for Sustainable Development Secretariat, Division of Sustainable Development, Department for Policy coordination and Sustainable Development (DPCSD), 2 United Nations Plaza, 22nd flr., New York, New York 10017

Paden, M. (Ed.), Teacher's Guide to World Resources: Exploring Sustainable Communities. Dubuque, Iowa: Kendall Hunt Publishing Company, 1997.

Paden, M. (Ed.), Teacher's Guide to World Resources: Sustainable Development. Dubuque, Iowa: Kendall Hunt Publishing Company, 1998.

GEOGRAPHY

Academic Content Standard

6. Students apply knowledge of people, places, and environments to understand the past and present and to plan for the future.
   6.2 Students know how to apply geography to understand the present and plan for the future.

Workplace Competencies

GRADES 9-12 BENCHMARKS	COMMUNICATION SKILLS: Demonstrates the ability to receive and relay information clearly and effectively							ORGANIZATIONAL SKILLS: Demonstrates skills to effectively and efficiently operate within a workplace					THINKING SKILLS: Demonstrates the ability to use reasoning						TECHNOLOGY SKILLS: Demonstrates the ability to work with a variety of technologies				WORKER QUALITIES: Demonstrates the characteristics of an effective worker					
	Listening	Speaking	Reading	Writing	Interpreting	Negotiating	Persuading	Planning	Time Management	Using Resources	Systems Thinking	Evaluating	Problem Solving	Decision Making	Creative Thinking	Learning	Analyzing	Mathematics	Computer Literacy	Selects Technology	Applies Technology	Uses Technical Info.	Self Management	Team Member	Responsibility	Flexibility	Leadership	Diversity
a. evaluating a contemporary issue using geography knowledge, skills, and perspectives				*							●	●			●													
b. comparing and contrasting how different viewpoints influence the development of policies designed to use and manage Earth's resources				●						●		●	●			●											●	

GRADE LEVEL

K 1 2 3 4 5 6 7 8 9 10 11 12

9-12

STATE STANDARD

6. Students apply knowledge of people, places, and environments to understand the past and present and to plan for the future.
   6.2 Students know how to apply geography to understand the present and plan for the future.

BENCHMARK

a. evaluating a contemporary issue using geography knowledge, skills, and perspectives

WORKPLACE COMPETENCY

Communication Skills: Interpreting
delineates and analyzes oral and written information and synthesizes information into a conclusion

RESOURCE

"If you can get their interest, you can teach them. Make education relate to their world."

- Gretchen Daley, Soroco High School

GEOGRAPHY

LEARNING ACTIVITIES

ACADEMIC CONTENT STANDARD

A teacher informs students that a bill is being introduced into the state legislature that would require communities in Colorado to have a plan in place for growth management. Students analyze various communities, gather geographic data, report on the patterns of growth in the state and determine the possible impact such a bill would have on communities. Students develop PowerPoint presentations on their findings.

WORKPLACE COMPETENCY

COMMUNICATION SKILLS: INTERPRETING

Students discuss the elements of interpreting including cause and effect. Students describe how interpretation can change the outcome of a project or a decision. Interpretation skills are used to develop their plan.

CAREER DEVELOPMENT

As you are planning the project solicit the perspectives of town planners, developers, and any regulations the governments requires. Career information cna also be gathered.

COMMUNITY

- Obtain population projections from the town planning offices. Estimate the number of new services that will be necessary to meet increased population.
- The students and teacher invite members of the community ranging from members of the legislature, city planners, university geography and urban planning professors, parents, and department of education officials to discuss their reasons why they think this would happen, and any other conclusions at an evening presentation.

ASSESSMENTS

ACADEMIC CONTENT STANDARD

Evaluate the students on their ability to:
- predict probable consequences of events or plans of action
- gather the information needed to complete their presentation

WORKPLACE COMPETENCY

COMMUNICATION SKILLS: INTERPRETING

Evaluate the students on their ability to:
- analyze oral and written information
- explain, support and verify their predictions
- synthesize the information into a conclusion

EXTENSIONS

- Students could each be assigned a role (i.e., city planner, geologist, etc.) and create their own communities in small groups based upon their findings.
- Look/research other communities that are similar and how they have planned for future development/growth.

IV. SAMPLE RUBRIC

Standard 3 - **Grades** 5-8

This rubric is associated with the activity on Page 18 b

Assessment	In Progress	Essential	Proficient	Advanced
Academic Standard: Students understand how physical processes shape the Earth's surface patterns. 3.2 Students know the characteristics and distributions of physical systems of land, air, water, plants and animals. Benchmark a. identify the local/world patterns of an ecosystem.	Academic Standard: Students: • cannot identify how ecosystems function and their relation to human development on the food chain. • research on ecosystems was incomplete • research does not sufficiently prove how/why specific elements effect ecosystem changes • components were not identified • pros and cons of recycling products and the effects on ecosystems were not shown.	Academic Standard: Students: • can identify how ecosystems function and their relation to human development on the food chain • research on ecosystems showed the impact of human development only locally • research on how/why ecosystems change does not reflect the impact of specific elements • could identify some components of an ecosystem • pros and cons of recycling products and the effect on ecosystems not clear	Academic Standard: Students: • can identify local and global ecosystems, their patterns and the impact of human development on food chains • research on local and global ecosystems demonstrated the impact of human development • research indicated how/why ecosystems change based on effects of specific elements • can identify components of an ecosystem and relate to specific surface patterns around the world • pros and cons of recycling products were shown.	Academic Standard: Students: • research thoroughly indicates impact of human development on the food chain (local and global ecosystems), as well as, predicting future impact • completely report effects of all specific elements on ecosystems around the world • can identify components of an ecosystem and relate to specific surface patterns around the world • pros and cons of recycling products were shown and predicted for the future.
Workplace Competency: Organizational Skills: Systems Thinking understands the nature of systems, develops and adapts systems to meet organizational needs	Workplace Competency: in a written paragraph: • the system is not defined • elements of the system are not identified. • Accurate information is not provided regarding elements and how they effect ecosystems.	Workplace Competency: in a written paragraph: • the system is partially defined • not all of the elements of the system were identified. • some information is provided regarding elements and how they effect ecosystems.	Workplace Competency: in a written paragraph: • the system was defined • all of the elements of the system were identified. • some information is provided regarding elements and how they effect ecosystems.	Workplace Competency: in a written paragraph: • the system was defined and clearly related to other global systems • the elements of the system were defined and expanded upon including impact of elements.

SCHOOL-TO-CAREER RESOURCE CENTERS

The following resource centers were created to support Colorado communities in building local School-to-Career Partnerships. This support includes: materials, technical support, orientation and specific content presentations, and professional development opportunities. Please contact one of the centers below for more information.

Northern Colorado
Connie Long
Aims Community College
Continuing Education Division
5590 11th Street
Greeley, CO 80634
Phone: (970) 330-8008 X6740
E-Mail: connie_long@ceo.cudenver.edu

Denver/Metro
Alice Potter
Community College of Denver
P.O. Box 173363, Campus Box 614
Denver, CO 80217-3363
Phone: (303) 556-2592
E-Mail: alice_potter@ceo.cudenver.edu

Southern Colorado
Julie Sumpter
Otero Junior College
1802 Colorado Avenue
La Junta, CO 81050
Phone: (719) 384-6835
E-Mail: julie_sumpter@ojc.cccoes.edu

Western Colorado
Gail Smith
Region Six Resource Center
P.O. Box 4548
Frisco, CO 80443
Phone: (970) 668-1120
E-Mail: roasmith@colorado.net

MAKING STANDARDS WORK EVALUATION

The Colorado Department of Education and The Colorado School-to-Career Partnership would appreciate your comments about *Making Standards Work* Handbooks.

Please take a minute to complete his evaluation.

Name _____ (optional) Position _____

School District _____

Grade Level: Elem. ____ Middle School ____ High School ____ Other _____

I. Overall value of handbook:

		Poor	Fair	Good	Excellent
1.	Quality of information	1	2	3	4
2.	Usefulness for educators	1	2	3	4
3.	Format of information	1	2	3	4

II. Any comments about how you adapted the learning activities to meet your needs.

III. Number of students impacted by the classroom activities presented in this handbook. Approximately: _____

IV. Any suggestions for extending the use of this book?
(for example: other areas of interest, additional activities, distribution)

VI. Are you a *Making Standards Work* author? Yes _____ No _____

To request additional copies of the Geography Handbook, please contact:

Career & Technical Education Resource Center of Colorado
1059 Yosemite Street, Bldg. 758, Room 117
Aurora, CO 80010
phone: (303) 340-7350
fax: (303) 340-7353
www.cterc.cccoes.edu

Or E-mail: cterc@cccs.cccoes.edu

Thank you.

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Colorado Department of Education
Attention: Heather Hotchkiss/Kelli Roark
201 East Colfax, Room 502
Denver, CO 80203

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